Treasury Board of Canada Secretariat
Secrétariat du Conseil du Trésor du Canada

CLASSIFICATION STANDARD

TECHNICAL INSPECTION

Technical Category

Canada

CLASSIFICATION STANDARD

TECHNICAL INSPECTION

TECHNICAL CATEGORY

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CONTENTS

INTRODUCTION

This classification standard describes the plans to be used to evaluate jobs that are allocated to the Technical Inspection Group. It consists of an introduction, definitions of the Technical Category and of the occupational group, a standard job description for Inspector Trainee, Level 1, point rating scales for other jobs and bench-mark position descriptions.

Inspector Trainee - Level Determinant 1

A standard job description of an Inspector Trainee - Level 1 appears on page 7.

Point Rating

Point rating is an analytical, quantitative method of determining the relative value of jobs. Point-rating plans define characteristics or factors common to the jobs being evaluated, define degrees of each factor and allocate point values to each degree. The total value determined for each job is the sum of the point values assigned by the raters.

All methods of job evaluation require the exercise of judgement and the orderly collection and analysis of information in order that consistent judgments can be made. The point-rating method facilitates rational discussion and resolution of differences in determining the relative value of jobs.

Factors

The combined factors may not describe all aspects of jobs. They deal only with those characteristics that can be defined and distinguished and that are useful in determining the relative worth of jobs. Five factors are used in this plan.

Point Weighting and Distribution

The point weighting of each factor reflects its relative importance. Similarly, points are distributed to the factors or elements in an arithmetic progression.

Rating Scales

In the rating plan the following factors, weights and point values are used.

Factor	Element	Percentage of Total Points	Point Weighting Minimum	Point Weighting Maximum
Skill and Knowledge		40	50	400
Technical Responsibility	Scope for Initiative and Judgement Impact of Activities	35	50	350
Working Conditions		10	10	100
Supervision		15	15	150
		100		1,000

Bench-mark Positions

Bench-mark position descriptions are used to exemplify degrees of factors. Each description consists of a brief summary, a list of the principal duties with the percentage of time devoted to each, and specifications describing the degree of each factor to which the position is rated. The bench-mark positions have been evaluated and the degree and point values assigned for each factor are shown in the specifications.

The rating scales identify the bench-mark position descriptions that exemplify each degree. These descriptions are an integral part of the point-rating plan and are used to ensure consistency in applying the rating scales.

Use of the Standard

There are seven steps in the application of this classification standard.

1. The position description is studied to ensure understanding of the position as a whole. The relation of the position being rated to positions above and below it in the organization is also studied.

2. Allocation of the position to the category and the group is confirmed by reference to the definitions and the descriptions of inclusions and exclusions.

3. Level 1 will be assigned to a position having determinants which correspond on the whole with the duties and responsibilities of the standard job description on page 7. Other positions will be rated against the rating scales on the pages which follow.

4. Tentative degrees of each factor for the position being rated are determined by comparison with degree definitions in the rating scales. Uniform application of degree definitions requires frequent reference to the description of factors and the notes to raters.

5. The description of the factor in each of the bench-mark positions exemplifying the degree tentatively established is compared with the description of the factor in the position being rated. Comparisons are also made with descriptions of the factor in bench-mark positions for the degrees above and below the one tentatively established.

6. The point values for all factors are added to determine the tentative total point rating.

7. The position being rated is compared as a whole with positions to which similar total point values have been assigned, as a check on the validity of the total rating.

Determination of Levels

The ultimate objective of job evaluation is the determination of the relative value of jobs in each occupational group. Jobs that fall within a designated range of point values will be regarded as of equal difficulty and will be assigned to the same level.

LEVEL AND LEVEL BOUNDARIES

Points	Levels
Level Determinants	TI-1
Minimum - Maximum	
125 - 300	TI-2
301 - 375	TI-3
376 - 450	TI-4
451 - 550	TI-5
551 - 650	TI-6
651 - 825	TI-7
826 - 1,000	TI-8

CATEGORY DEFINITION

Occupational categories were repealed by the Public Service Reform Act (PSRA), effective April 1, 1993. Therefore, the occupational category definitions have been deleted from the classification standards.

GROUP DEFINITION

For occupational group allocation, it is recommended that you use the Occupational Group Definition Maps, which provide the 1999 group definition and their corresponding inclusion and exclusion statements. The maps explicitly link the relevant parts of the overall 1999 occupational group definition to each classification standard.

GLOSSARY OF TERMS

"Inspection" refers to the comparison of a product/unit/item/system or procedure to a set of established criteria. This comparison requires the use of one or more of a variety of processes involving measurement, examination and tests. Inherent in inspection is the mental process in deciding whether or not there is compliance with the criteria.

Due to semantic difficulties and in order to avoid using long and repetitive degree definitions, solely for the purpose of these Rating Scales, the word inspection will mean any or all of the elements in the Inclusions section of the Group Definition on page 5.

"Inspection Program" refers to the specific plans of action that are developed and implemented by the organization to achieve its objectives.

"Inspection Project" refers to a segment of a program for which objectives have been defined and which is circumscribed by budgetary controls, time limits and the availability of resources.

"Policy" refers to a declaration of aims and intents established by legislation or authority of the Deputy Head to guide future courses of action.

"Quality Assurance" refers to the activities and functions concerned with and necessary for providing adequate confidence in attaining quality.

"Quality Control" refers to the operational techniques and activities that ensure the attainment of quality to specified requirements.

JOB DESCRIPTION - INSPECTOR TRAINEE LEVEL DETERMINANTS 1

Reports to the Operations Supervisor, in a large or medium district, or to the District Manager, in a small district.

Duties

Studies the Weights and Measures Act, Regulations, directives and inspection procedures.

Conducts inspections and tests of simple weighing and measuring devices; performs mathematical calculations and applies correction factors, when necessary.

Specifications - Level Determinant 1

This position is at the recruiting level and involves participating in a national training program, receiving on-the-job training in a district, accompanying senior inspectors on regular inspections, doing inspection work and testing simple weighing and measuring devices, under direct supervision.

SKILL AND KNOWLEDGE

This factor is used to measure the technical and administrative knowledge and skill required to perform the duties of the position.

Definitions

"Knowledge" refers to the depth and breadth of the understanding and application of legislation, regulations, policies, standards, principles, methods, techniques, procedures and practices required to perform the duties of the position. This knowledge can be obtained by formal study, courses of instruction, on-the-job training and experience, and by working in related and progressively more complex and responsible jobs.

"Skill" refers to the facility in applying the knowledge.

Notes to Raters

The degrees of the Skill and Knowledge factor assigned to the bench-marks have been established by the comparative ranking of representative positions in the Technical Inspection Group. The seven degrees of the factor are not related to years spent in acquiring skill and knowledge, but indicate the relative skill and knowledge requirements of positions within the occupational group.

When establishing the degree of skill and knowledge required to perform the duties of a position raters are to consider such characteristics as:

1. The variety, the complexity and the novelty of principles, technologies, and inspection techniques, practices, methods and procedures used.

2. Skill and knowledge required to manage projects, resources and operations.

3. Skill and knowledge required to perform advisory duties.

The degree tentatively selected is to be confirmed by comparing the duties and requirements of the position being rated with the duties and specifications of the bench-marks.

RATING SCALE - SKILL AND KNOWLEDGE

Degree of Skill and Knowledge	Points	Bench-mark Position Descriptions
1	50	19 Junior Inspector, Weights and Measures
2	108	16 Senior Inspector, Weights and Measures 17 Senior Inspector, Electricity and Gas
3	166	14 Operations Supervisor, Weights and Measures 15 Installation Inspector, Electricity and Gas 18 Detachment Quality Representative
4	224	8 District Manager, Weights and Measures 10 Regional Accident Investigator 11 Marine Surveyor (Small Vessels) 12 Airworthiness Inspector - District Office 13 Gravimetric Specialist
5	283	6 Senior Defects Investigator 7 Detachment Quality Manager 9 Marine Surveyor, Electrical
6	342	3 Detachment Commander 4 Senior Surveyor 5 Regional Superintendent, Manufacturing, Repair and Overhaul
7	400	1 Chief, Airworthiness Inspection 2 Section Head, Electrical/Electronics Engineering

TECHNICAL RESPONSIBILITY

This factor is used to measure the difficulty in terms of the scope for initiative and judgement and the impact of activities.

Definitions

"Scope for initiative and judgement" refers to the freedom to take particular courses of action within the framework of regulations, directives, instructions and established procedures; the nature of the direction or supervision received; the availability of advice and guidance; and the degree of authority delegated by superiors.

"Impact of activities" refers to the importance of the activities in terms of their effect. Notes

to Raters

The degrees of the Impact of Activities element are illustrated by the bench-marks. In evaluating positions under the Impact of Activities element, raters are to consider the kind, significance and variety of departmental programmes or industrial and commercial operations that are affected, and the following characteristics of the work:

1. The effect on the implementation and objectives of departmental inspection programs, projects or contracts; the effect on Government policy.

2. The effect on departmental resources.

3. The effect on the operations of industrial and commercial organizations; the effect on International commitments.

4. The effect on individuals or groups outside the public service such as members of the general public.

5. The effect on the serviceability of equipment and the safety of life.

6. The extent to which the incumbent is the effective authority.

7. The nature and variety of inspection activities performed.

8. The consequences of an error in judgement.

Any one characteristic is only an indication of the Impact of Activities, and the whole context within which the work is performed must be considered. The degree of the two elements of the Technical Responsibility factor tentatively selected must be confirmed by comparison of the duties of the position being rated with the descriptions of the duties and specifications of the bench-marks.

RATING SCALE - TECHNICAL RESPONSIBILITY

	Scope for Initiative and Judgement and Degree			
Degree of Impact of Activities	Conducts inspections under supervision. Applies regulations, standards, directives or the terms and conditions of contracts. Unusual problems are referred to the supervisor for action or for instructions. Courses of action are clearly indicated.	Organizes and conducts inspections. Enforces the application of regulations, directives, standards or the terms and conditions of contracts. Selects a course of action that may require modification of established inspection practices. Unusual problems are discussed with a supervisor for guidance.	Directs, co-ordinates, controls and conducts inspection projects. Evaluates proposals and authorizes changes in procedures. Develops new techniques within the intent of established inspection practices. Recommendations are made to effect changes in the conduct of a program or project. (Unusual problems are referred to a supervisor together with proposals on the course of action to be considered.	Plans, develops, implements, modifies and co-ordinates inspection programs. Develops and evaluates standards, regulations and quality assurance procedures. Plans, develops and modifies inspections in response to technological advances or legislative requirements. Develops or implements novel courses of action that affect the resources and the conduct and administration of inspection programs. Unusual problems are referred to a superior with a report on the feasibility of solutions and recommendations on the course of faction to be followed.
	A	B	C	D
	50/	103/	156/	209/
1	19 Jr. Insp. W&M	18 Det. Qual. Rep.		
2	97/	150/ 14 Operations Sup., W&M 15 Install. Insp., E&G 16 Senior Insp. W&M 17 Senior Insp., E&G	203/ 7 Detach. Qual. Manager 13 Gravimetric Specialist	256/
3	144/	197/ 9 Marine Surv. (Electrical) 11 Marine Surv. (Small Vessels) 12 Airworthiness Inspector - District Office	250/ 5 Regional Sup., Manuf. Rep.& Over. 6 Senior Defects Invest. 8 District Man., W&M 10 Reg. Accident Invest.	303/ 2 Section Head, Electrical/ Electronics Engineering
4	191/	244/	297/ 3 Detach. Comm. 4 Senior Surveyor	350/ 1 Chief, Airworthiness Inspection

WORKING CONDITIONS

This factor is used to measure the type, variety, severity, intensity, duration or frequency of exposure to conditions such as:

- physical efforts: standing, walking, handling objects, working positions;
- exposure to dust, dirt, heat, cold, obnoxious odours, noise, vibration or injuries;
- the requirement to wear cumbersome protective clothing or equipment; and
- the requirement to be away from home frequently or for significant periods.

Notes to Raters

In rating positions for exposure to injuries, credit shall be allowed only for probable occurrences of injury or ill health and not for those that are remotely possible. Raters should also consider the nature of the materials being handled or equipment used, the ability to control the hazard and the requirement to employ safety devices and protective equipment and clothing.

The degree tentatively selected must be confirmed by comparing the duties of the position being rated with the duties and specifications of the bench-mark positions that exemplify that degree.

At least minimum points will be assigned to all positions under this factor.

RATING SCALE - WORKING CONDITIONS

Working Conditions and Degree		Points		Bench-mark Position Descriptions
Very Good Working Conditions: Predominantly Office Environment	1	10	1 2 4 5	Chief, Airworthiness Inspection Section Head, Electrical/Electronics Engineering Senior Surveyor Regional Superintendent, Manufacturing, Repair and Overhaul
3ood Working Conditions	2	32	3 7 8 13	Detachment Commander Detachment Quality Manager District Manager, Weights and Measures Gravimetric Specialist
=air Working Conditions	3	54	6 12 14 18	Senior Defects Investigator Airworthiness Inspector - District Office Operations Supervisor, W&M Detachment Quality Representative
'oor Working Conditions	4	77	9 10 15 17	Marine Surveyor, Electrical Regional Accident Investigator Installation Inspector, E&G Senior Inspector, E&G
Very Poor Working Conditions	5	100	11 16 19	Marine Surveyor (Small Vessels) Senior Inspector, Weights and Measures Junior Inspector, Weights and Measures

SUPERVISION

This factor is used to measure the continuing responsibility for the work and guidance of other employees.

Notes to Raters

In all positions there is some requirement to show others how to perform tasks or duties; therefore, no position will be assigned less than Degree 1 under this factor.

Occasional supervision, such as that performed during absences of the supervisor on annual or sick leave, is not to be rated.

In evaluating positions all the characteristics outlined for each degree of supervisory responsibility must be considered; the criterion for the assignment of degrees to positions is that a position must include most of the characteristics of the degree assigned.

RATING SCALE - SUPERVISION

Nature of Supervisory Responsibility, and Degree		Points	Bench-mark Position Descriptions
Shows other employees how to perform tasks or duties.	1	15	6 Senior Defects Investigator 9 Marine Surveyor, Electrical 10 Regional Accident Investigator 11 Marine Surveyor (Small Vessels) 12 Airworthiness Inspector, District Office 13 Gravimetric Specialist 15 Installation Inspector, Electricity and Gas 16 Senior Inspector, Weights and Measures 17 Senior Inspector, Electricity and Gas 18 Detachment Quality Representative 19 Junior Inspector, Weights and Measures
Schedules day to day work; assigns tasks; instructs employees in work methods, procedures and techniques and in the solution of problems; identifies training requirements; checks work for adequacy, complete ness and adherence to procedures and standards of quality and quantity.	2	60	14 Operations Supervisor, Weights and Measures
Plans, organizes and controls the work of subordinates (longer term) in an assigned area to meet inspection program or project requirements; establishes work priorities; allocates resources; identifies development requirements and develops training plans on a local basis; recommends transfers and disciplinary action.	3	105	4 Senior Surveyor 5 Regional Superintendent, Manuf., Repair and Overhaul 7 Detachment Quality Manager 8 District Manager, Weights and Measures
Manages, coordinates and evaluates the utilization of human resources through subordinate supervisors within a major organizational area; sets goals and objectives; reviews and approves work plans; determines the resources requirements; reviews and assesses organizational training requirements and training programs; assesses the adequacy of performance standards and authorizes or recommends changes; recommends changes in the organization.	4	150	1 Chief, Airworthiness Inspection 2 Section Head, Electrical/ Electronics Engineering 3 Detachment Commander

BENCH-MARK INDEX

BM	TITLE	S & K	TR	Working Cond.	SUP.	TOTAL	LEVEL
1	Chief, Airworthiness Inspection	7/400	D4/350	l/ 10	4/150	910	8
2	Section Head, Electrical/ Electronics Engineering	7/400	D3/303	l/ 10	4/150	863	8
3	Detachment Commander	6/342	C4/297	2/ 32	4/150	821	7
4	Senior Surveyor	6/342	C4/297	l/ 10	3/105	754	7
5	Regional Superintendent, Manufacturing, Repair and Overhaul	6/342	C3/250	1/ 10	3/105	707	7
6	Senior Defects Investigator	5/283	C3/250	3/ 54	l/ 15	602	6
7	Detachment Quality Manager	5/283	C2/203	2/ 32	3/105	623	6
8	District Manager, Weights and Measures	4/224	C3/250	2/ 32	3/105	611	6
9	Marine Surveyor, Electrical	5/283	B3/197	4/ 77	l/ 15	572	6
10	Regional Accident Investigator	4/224	C3/250	4/ 77	l/ 15	566	6
11	Marine Surveyor (Small Vessels)	4/224	B3/197	5/100	l/ 15	536	5
12	Airworthiness Inspector, District Office	4/224	B3/197	3/ 54	l/ 15	490	5
13	Gravimetric Specialist	4/224	C2/203	2/ 32	l/ 15	474	5
14	Operations Supervisor, Weights and Measures	3/166	B2/150	3/ 54	2/ 60	430	4
15	Installation Inspector, Electricity and Gas	3/166	132/150	4/ 77	l/ 15	408	4
16	Senior Inspector, Weights and Measures	2/108	132/150	5/100	l/ 15	373	3
17	Senior Inspector, Electricity and Gas	2/108	82/150	4/ 77	l/ 15	350	3
18	Detachment Quality Representative	3/166	Bl/103	3/ 54	l/ 15	338	3
19	Junior Inspector, Weights and Measures	1/ 50	A1/ 50	5/100	1/ 15	215	2

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 1 Level: 8

Descriptive Title: Chief, Airworthiness Inspection Point Rating: 910

Reports to: Director, Airworthiness Branch

Position Profile

Responsible for the development and implementation of departmental policy and procedures for the manufacture and maintenance of aeronautical products. This includes the surveillance of manufacturing and air carrier maintenance activities, the issuance and suspension of certificates of Airworthiness and certificates of approval for manufacturing and maintenance organizations, and the standards of the licensing of Aircraft Maintenance Engineers (AME).

Duties	% of Time
Directs and controls the research and development of regulatory standards for the manufacture and maintenance of aeronautical products; liaises with foreign airworthiness authorities to establish compatibility of standards between the national authorities; recommends their approval; provides technical advice and guidance with respect to changes in Canadian Legislation, Regulations and procedures.	25
Directs and controls the evaluation of Regional requests for approval of companies engaged in the manufacture and maintenance of aeronautical products, of divisional activities relating to the training and licensing of aircraft maintenance personnel, of maintenance programs for new aircraft types manufactured in Canada and Canadian manufactured powerplants for approval and of maintenance programs for foreign manufactured aircraft types and foreign manufactured powerplants for validation.	25
Directs the development and assessment of policies and procedures for surveillance, audit and enforcement functions of airworthiness inspectors throughout Canada with respect to regulatory control of the manufacture and maintenance of aeronautical products; issues short term policy; recommends approval of other policy.	20
Directs and controls the development of policies, procedures and training program relating to the suspension and reinstatement of Aircraft Certificates of Airworthiness and Flight Permits; directs the formulation of standards relating to the import and export airworthiness certification of aeronautical products and related components.	15
Provides direct supervision of 5 superintendents, 15 airworthiness inspectors and 3 support staff; acts as first level officer in grievance procedure; determines effectiveness of existing inspection programs and resources (220 airworthiness inspectors) in 6 Regional and 19 District Offices; develops National Policy on the Training of Airworthiness Inspectors.	15

Specifications Degree/ Points

Skill and Knowledge 7 / 400

The work requires considerable knowledge of manufacturing and maintenance operations, practices and techniques used in the civil aviation industry. In addition, a detailed knowledge of civil aeronautics legislation, policies and procedures is required as well as a detailed knowledge of airworthiness and international trade agreements such as the General Agreement on Tariff and Trade (GATT) in Civil Aircraft, Agreement on Technical Barriers to Trade; bilateral airworthiness agreements; ICAO Annexes on Airworthiness, continuing airworthiness and AME training and licensing. Good knowledge is required of provincial legislation respecting post secondary technical training and apprenticeship training.

Knowledge is also required of Treasury Board, Public Service Commission and Public Service Staff Relations Board policies and procedures with respect to collective agreements, staff association and union activities and grievance and appeal procedures. This knowledge is particularly important considering the existence of the Canadian Airworthiness Inspectors Association within the Canadian Union of Transport Employees, since the office is involved as a staff advisor to the Director Airworthiness, Director General Aviation Regulation, and the Assistant Deputy Minister Aviation on this subject.

The work also requires skill in planning and coordinating regulatory and internal audit and surveillance programs relating to manufacturing and maintenance. Skills are required in both briefing and negotiating with special interest groups as well as foreign manufacturing and maintenance companies and foreign airworthiness authorities.

Technical Responsibility D4 /350

The work includes directing and controlling the planning, development, coordination and assessment of policies and procedures relating to the manufacture and maintenance of aeronautical products. These policies and procedures are promulgated both as regulatory requirements to the aviation public and as internal directives to airworthiness inspection staff. The office is also a major focal point for the provision of advice on the regulation of the manufacture and maintenance of aeronautical products to a wide variety of organizations and persons.

In addition to the above staff functions, there is major line involvement in aeronautical product type approval and validation/familiarization programs, principally with respect to the review and approval of product maintenance and manufacturing programs. The office provides direct technical support to other members of type approval boards and validation/familiarization teams with special knowledge of maintainability of aeronautical products. There is also an involvement in the approval of companies engaged in manufacturing and maintaining aeronautical products as well as approval of educational institutions which have aircraft maintenance training programs.

The work requires intimate participation in regional and headquarter programs for training airworthiness inspection staff. The office is also responsible for the preparation of special national training programs for airworthiness inspectors.

Degree/
Points

The results of the staff control of policies and procedures and the line involvement in product maintenance programs can have a major impact on the aviation industry. For example, a change in policy on the intervals at which an aircraft must be inspected and certified by an AME can have an immediate financial impact on owners of aircraft of all sizes. A change in policy on the degree to which large maintenance organizations such as Air Canada can exercise a delegated authority, can have a financial effect on how the company is run and an immediate political effect between the company president and the Minister.

Policies on the respective roles of approved companies and licensed aircraft maintenance personnel have major impacts on both the economy of the industry and the degree to which the department can exercise a direct control on manufacturing and maintenance procedures. Errors in judgement in developing these policies and the resultant regional enforcement programs could have significant effects on both safety and economics. Similarly, an error in judgement in the policy and training on suspension of aircraft flight authorizations could result in considerable embarrassment to the Department as well as the possibility of legal actions, which are time consuming and expensive. Lack of vigilance in implementing continuous airworthiness division recommendations can have an immediate adverse effect on aviation safety.

The increasing involvement of the office in the airworthiness aspects of GATT also has major economic ramifications. If other countries such as the US are seen to have ostensible safety regulations which are in fact trade barriers, prohibiting Canadian companies from overhauling components removed from U.S. registered aircraft, the effect on the aircraft maintenance industry in Canada is considerable. The current value of civil aeronautical products being exported from Canada is approximately $3 billion per year. This office has a direct involvement in manufacturing and maintenance standards which have a direct impact on these products and their export.

Working Conditions 1 / 10

Predominantly an office environment.

Supervision 4 / 150

Manages the operations of the Airworthiness Branch through five subordinate supervisors. Sets goals in conjunction with subordinates, reviews and approves work plans designed to meet goals, and reviews goal progress regularly. Delegates authority and responsibility to maximize capabilities of subordinates. Reviews and assesses training requirements and ensures effective training plans are developed.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 2 Level: 8

Descriptive Title: Section Head, Point Rating: 863
Electrical/Electronics Engineering

Reports to: Director, Quality Assurance Operations

Position Profile

A managerial position responsible for the development, implementation and evaluation of quality assurance programs for electrical, electronic and computer systems. The position manages and coordinates three sub-sections comprising: Land, Sea and Air Electronic Systems; Components, Repair & Overhaul and Computers (hardware and software); and Site Installations.

Duties	% of Time
Manages the Electrical and Electronics Section responsible for planning, directing and monitoring the departmental Quality Assurance (QA) operations for materiel and service; implements policy and recommends changes as required; recommends changes in the organization to improve its operation; develops QA requirements for capital acquisition projects; identifies the resources required to provide life cycle QA management of capital equipment; ensures that appropriate QA requirements are incorporated into contractual documents; advises Program Managers on QA standards, procedures and principles that can be applied to achieve project objectives; evaluates contractor's bid proposals for compliance with QA specifications; establishes QA requirements for components in the electrical, electronic, computer and fibre-optic commodity fields; represents the directorate to resolve interface problems; provides expertise and advises on the availability of test facilities.	50
Provides technical direction, guidance and support to Canadian Forces Technical Services Agencies and their detachments; develops QA Management Instructions; plans programs to improve the effectiveness and efficiency of techniques and procedures used by QA field staff; recommends technical training for personnel.	25
Manages the installation group; provides progress reports and advice to Design Authorities on site installations; schedules and oversees inspection work.	20
Reviews employee performance appraisals; discusses employee problems; recommends staff training; acts as first level grievance officer.	5

Specifications	Degree/ Points
Skill and Knowledge	7 / 400

The work requires a thorough knowledge of the principles of electrical engineering and computers; a thorough knowledge of the manufacturing, repair and overhaul operations in the electrical industry; a detailed knowledge of departmental QA policy, procedures and techniques, and the ability to develop, and monitor QA systems. Skill is also required

Degree/
Points

to manage members of the section and the Installation group and to review and assess performance and recommend career plans and training. A further requirement is the ability to conduct meetings, i.e. investigations of quality or administrative problems, and to represent senior management at such meetings. The ability to prepare comprehensive reports and correspondence is also required.

Technical Responsibility D3 / 303

The work requires the management of a staff of Quality Assurance specialists who participate in the development of contracts for electrical, electronic and computer systems. The position frequently provides QA expertise to QA field staff to ensure that they employ efficient QA techniques. This position sends specialists to support field staff **in** problem resolution or if the problem is of major proportions arranges personal visits to agency staff. The position represents the Quality Assurance Division at meetings with other department heads, contractors, trade and professional associations, and foreign governments, to resolve technical difficulties and explore interface problems. Ensures that branch and departmental QA policy is not contravened by checking that the direction given by staff **is** adequate and that contractors and field staff are correctly implementing departmental QA policy. Develops and evaluates standards, regulations and QA procedures. This position develops, tests and modifies QA procedures in response to changes in industrial Quality Control Systems. These changes usually result from the introduction of advanced production techniques such as statistical process control or "just in time" systems and affect the resources and administration of Government QA programs. Problems which are referred to the Director usually involve highly sensitive policy matters which allow a narrow degree of interpretation. Such referrals are accompanied by a recommended course of action.

The interpretation of quality standards affects the suitability of material, the contractor's competitive position, the cost to both the contractor and the government and the development of an industrial base within Canada which can serve the Department. The QA plans and techniques developed for use by field units influence the quality of materiel supplied to the Service. The proper use of qualified staff on any QA project has a direct bearing on the level of confidence, on the cost, and on contractor cooperation and respect for the QA organization. The deployment of installation inspectors must coincide with contract requirements, contractor availability, site preparedness and material availability. Errors in judgement can adversely affect operational readiness and cause a loss of the product to the user or delays in delivery.

Working Conditions 1 / 10

Predominantly an office environment with an intermittent requirement to travel to industrial facilities and site installations.

Supervision 4 / 150

Manages and coordinates the activities of section personnel through three subordinate supervisors; sets performance objectives and work goals; reviews and approves sub-section work plans; develops plans to cover short and long-term training requirements; reviews and assesses the adequacy of performance standards; adjusts or recommends changes in the organization to reflect varying tasking or work assignments; advises on personal development.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 3 Level: 7

Descriptive Title: Detachment Commander (208 Canadian Forces Technical Services Detachment) Point Rating: 821

Reports to: Commanding Officer (2 Canadian Forces Technical Services Agency)

Position Profile

This position is typical of that of a senior line manager located in a major industrial area. The Detachment Commander is responsible for the handling in the order of 1000 complex manufacturing and repair and overhaul contracts valued at approximately $750,000,000, many of which exceed one million dollars. Operating procedures are coordinated with the Deputy Regional Director who also provides regional personnel management and financial support services.

Duties	% of Time
Plans, organizes, directs and controls the operations of the Detachment's Quality Assurance and Logistic Management Program; develops and promulgates operating procedures and instructions; budgets annual expenditures; identifies trends and level of performance; directs and monitors the investigation of problems or complaints and the evaluation for recognition of contractor's Quality Control Programs, supply and logistic systems, quality manuals and procedures, and repair and overhaul schemes for compliance to government standards and contractual conditions; interprets quality assurance, contractual and specification requirements, discusses contract scheduling and performance of contractors and resolves problems and disputes.	50
Manages a staff of 39 military and civilian personnel engaged in assuring quality of material and services produced by industrial contractors; determines resource requirements; assigns responsibility; provides technical guidance to subordinates; reviews and evaluates staff performance; plans and administers career development and training programs; actions grievances at the first level.	20
Directs staff in the performance of their duties, briefs and advises Commanding Officer on administrative, personnel and technical matters of concern. Withholds release of material and approval of progress payments; briefs Design Authorities and Procurement Agencies on the impact of engineering and QA changes proposed by contractors; monitors staff's assessment of contractor's production, test, engineering and inspection facilities, processes and techniques; assesses the results of technical investigations.	20
Performs other duties such as: recommending, reviewing or commenting on Departmental or Agency policies, directives, regulations, procedures and practices and acting as Departmental spokesperson with industry for all these matters; liaising with Program Managers, Design Authorities, Life Cycle Materiel Managers and procurement personnel to ensure technical, monetary and contractual requirements are respected; writing reports.	10

Specifications

Degree/ Points

Skill and Knowledge — 6 / 342

The work requires a thorough knowledge of ballistics, chemical and mechanical engineering technology including mathematics, physics, chemistry; departmental Quality Assurance policy, national and international quality assurance agreements, regulations and practices; contract administration, departmental logistic procedures, financial management procedures and staffing procedures, quality audit, and procurement procedures; Treasury Board, Public Service Staff Relations Board policy and procedures with respect to collective agreements, staff association and union activities and grievance and appeal procedures. The work also requires skill in planning, developing, directing and coordinating quality assurance programs; providing technical advice; briefing and negotiating with senior officials of industry, Federal, NATO and other foreign governments; and planning and controlling detachment operations.

Technical Responsibility — C4 / 297

The work requires planning, controlling and directing detachment operations to ensure that Federal, NATO and other foreign government interests are safeguarded with respect to contracts concerning provision of supplies and new material and the manufacture and maintenance of equipment and parts thereof. This includes: coordinating and monitoring inspection projects; evaluating contractors' quality control systems, facilities and proposals and authorizing changes to work methods; interpreting and enforcing contract requirements with contractors; recommending engineering changes to the design authorities; and promoting compliance with federal government requirements. Changes in industrial practices and implementation of government policy are achieved through contact and discussion with senior management and technical personnel. The Detachment Commander is directly responsible to the Commanding Officer for the operational effectiveness of the detachment.

The activities affect the achievement of government objectives in a concentrated industrial region, the employment, training and development of staff and the use of financial and other resources. The activities also affect the qualification of contractors, the quality of product or service obtained, the realization of adequate financial, logistic and administrative controls, approvals of repair schemes and relations with Canadian, NATO and other foreign government agencies.

Errors in judgement in controlling the regional program, monitoring inspection activities and providing advice could result in failure to meet departmental operational commitments and objectives, incomplete inspections, delays in delivery, approval of inadequate plant facilities, quality systems and manufacturing and repair practices, approval of inferior products or systems, acceptance of defective product, withholding qualification approval, loss of departmental prestige resulting in monetary and labor losses to industry and government and/or International embarrassment.

Working Conditions — 2 / 32

Implementation of government policy, problem investigation and the management of field staff requires frequent travel (every week) to a wide range of industrial facilities engaged in the fabrication of metals; the manufacture of ammunitions, chemical products and mechanical components; and in the repair and overhaul of government equipment. This involves intermittent standing and walking, and exposure to hazardous and disagreeable conditions such as obnoxious odors and the wearing of protective clothing.

	Degree/ Points
Supervision	4 / 150

Formulates objectives within a broad policy framework. Monitors the management of resources through six subordinate supervisors. Evaluates Detachment performance and makes changes in organization and personnel procedures to improve efficiency and effectiveness. Identifies short and long term training needs and establishes training programs.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 4 Level: 7

Descriptive Title: Senior Surveyor Point Rating: 754

Reports to: Regional Manager - Ship Safety

Position Profile

This position is one of six Senior Surveyors who report to the Manager responsible for Ship Safety activities within the region. Inspections and other related duties are carried out under the supervision of this position to ensure the safe condition and conduct of vessels that operate in the Great Lakes system and overseas. Such vessels may include large passenger ships, cargo and bulk carriers, tankers, fishing vessels and tour boats. Inspections may involve foreign ships as well as Canadian. The office is also responsible for the investigation and if necessary, prosecution for offenses regarding pollution of the environment from shipping.

Duties	% of Time
Administers the Toronto Ship Safety Office and supervises nine Marine Surveyors and three Support Staff; establishes priorities and allocates resources; identifies staff training and development requirements; provides advice and guidance to subordinates; manages a budget of $5M and an annual revenue of $60K; drafts policy recommendations for discussion with the Regional Manager; provides advice and recommendations to industry regarding matters of a highly complex and unusual nature.	20
Carries out or assigns to subordinate surveyors, ship safety inspection duties respecting the operation, design, construction, modification, overhaul and maintenance of ships' machinery, hulls, lifesaving, firefighting, navigation, cargo handling and other equipment; provides advice in the preparation of design and modification drawings and specifications; explains to the public complex legal and technical regulations and requirements; approves ships' machinery, hull and equipment plans; assesses performance, handling qualities, safety and seaworthiness; carries out pollution prevention inspection duties; surveys ships for tonnage measurements; issues to ships, after inspection, the appropriate certificates relating to safety and pollution control; carries out or delegates the survey and certification of ships loading and stowing cargoes which present potential hazards; acts as a port warden and inspector of dangerous goods; acts as an inspector under the Safe Container Act and regulations.	60
Carries out or assigns to subordinates the examination of candidates for Certificates of Competency and Qualification in various seagoing disciplines and occupations.	15
Carries out or assigns to subordinates the investigation of shipping casualties, accidents on board ships and infractions of legislation and regulations.	5

Specifications

	Degree/ Points
Skill and Knowledge	6 / 342

The work requires a thorough knowledge of the shipping industry and related agencies, with particular emphasis on regulatory aspects of the Canada Shipping Act, departmental policies, directives, and regulations (federal and international). A sound working knowledge of the design, construction, repair, operation and maintenance of commercial shipping is essential. This knowledge, allied to extensive experience, is required in assessing the suitability of design plans and documents dealing with all aspects of vessel construction, outfit, power-installations, repair, conversion, loading operation, and pollution-control and abatement. It also requires a knowledge of departmental standards and procedures in the fields of marine navigation, pilotage, traffic control and ship handling, and of the fishing industry and small vessel operations.

Skill is required to maintain a balance between good public relations and protection of the public and safety at sea, without in either case exceeding legal authority, conflicting with departmental policies or precedents, or imprudently jeopardizing life or property. Skill is required in interviewing candidates for certificates of competency. This skill has to be coupled with sufficiently intimate knowledge of these positions to make recommendations as to a candidate's fulfillment of required standards. Significant management skills are required to ensure Regional goals are met by making efficient and effective use of assigned human and financial resources.

Technical Responsibility	C4 / 297

The work requires direct participation in the planning, directing and controlling of marine safety and pollution-prevention programs in the Central Region, with particular responsibility for the Toronto district. This involves predicting future requirements, staff and resources, to reflect anticipated developments in local marine industries, foreseen legislation, and trends in the local economy. The work requires recommending policy changes in Regional operations and participating in Regional Policy recommendations to H.Q. which could also affect Ship Safety operations on a national level. The work also requires monitoring and inspecting the construction, modification and overhaul of ships, their machinery installations, components and equipment, participating in accident and pollution investigations and associated boards of inquiry, appearing in court to provide expert testimony in legal proceedings, and examining candidates for certificates of competency in various seagoing disciplines and occupations. This position is required to develop and establish guidelines and set precedents for subordinates in the resolution of these problems, and to handle the more contentious situations. In the latter case the senior surveyor will decide the issue or refer it to the Regional Manager Ship Safety with a recommended course of action.

Decisions and recommendations may have long-lasting effects and may involve costly changes in the construction, operation and economic viability of local shipping. Imprecise forecasts and decisions will incur inefficiency and unnecessary expense, and may hamper local economic development in the marine transportation, shipbuilding and ship-operating fields. Errors in judgement during ship-survey can delay the construction, overhaul or sailing of ships resulting in severe economic penalties to owners and sometimes to the community.

Degree/
Points

In the investigation of accidents or pollution incidents, and during routine inspections and surveillance, failure to recognize cause and to recommend corrective action can lead to recurrence of mechanical failures, repetition of accidents and aggravated pollution; improper assessment of fault can permit evasion of legal and financial obligations resulting in public criticism.

Errors in resolving contentious matters involving masters and crews can embarrass the department and bring complaints from labour-unions, management or governments. Errors in discerning a candidate's fitness to undertake examinations for Certificate of Competency, or to occupy a seagoing position, can have serious consequences for the candidate's career or for the safe operation of ships, thereby jeopardizing both ships and crews.

Working Conditions 1 / 10

Predominantly an office environment but infrequently requires inspection of ships' hulls and internal compartments, ships' holds, ballast and fuel tanks, and other spaces in ships where poor lighting and ventilation prevail, and where there is exposure to dirt, fumes, dampness, heat or cold, noise, odours and inclement weather.

Supervision 3 / 105

The work requires the planning, allocation and control of work assigned to marine surveyors and support staff to ensure that the district office meets all objectives. Develops staff training plans. Provides advice and guidance of a technical or procedural nature when requested. Recommends transfers and disciplinary action.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 5 Level: 7

Descriptive Title: Regional Superintendent - Manufacturing, Repair and Overhaul Point Rating. 707

Reports to: Regional Manager Airworthiness

Position Profile

Responsible for the surveillance of all companies located in the Toronto region which are approved for the manufacture and maintenance of aeronautical products. This includes the issuance and suspension of certificates of approval, the routine audit of approved organizations, and the conduct of special campaigns which may be directed as part of the national airworthiness surveillance program.

Duties	% of Time
Plans, schedules and supervises the work of an inspection section; allocates work; reviews work reports; provides policy interpretation and technical guidance in the resolution of contentious issues and unusual problems; instructs six subordinates in work procedures and requirements; prepares employees' appraisal reports; recommends disciplinary action.	35
Appraises inspection organizations of approved Companies engaged in the manufacture, repair, overhaul or special processing of aeronautical products to ensure compliance with the pertinent Civil Aeronautics regulations; outlines departmental policies, directives, procedures and requirements pertaining to airworthiness and safety standards; evaluates the company's Quality Control functions such as purchasing, storage, calibration, process control, inspection and test procedures; conducts or directs the initial audit inspection of the company to evaluate the suitability of equipment, adequacy of facilities and implementation of the quality control procedures; discusses the audit report and methods to resolve discrepancies; examines the qualifications and experience of candidates nominated as Approved Inspectors, Airworthiness Inspection Representatives and Field Service Representatives; formulates the recommendation for approval or suspension of the company's certificate of approval.	30
Directs the issuance or suspension of Certificates of Airworthiness and Flight Permits for aircraft being maintained, repaired, modified or overhauled or for aeronautical products manufactured in the region; reviews the acceptability for importation and certification of foreign aircraft; conducts conformity inspections of Prototype and Production aircraft and other Aeronautical Products and their components during the approval phase for the product; monitors engine or component dismantling and functional tests to determine cause of failure and requests corrective action; appraises Aircraft Maintenance Engineers Technical training.	30
Performs other duties such as: preparing evidence for prosecution; reviewing manufacturer's bulletins and airworthiness directives; advising the public of airworthiness requirements.	5

Specifications

Degree/ Points

Skill and Knowledge — 6 / 342

The work requires a thorough knowledge of the Aeronautics Act and Regulations, departmental policies and procedures, international regulations governing manufacturing and maintenance of aeronautical products; good knowledge of design and operation of aeronautical products; broad knowledge of theory of flight; thorough knowledge of manufacturing, and maintenance methods of airframe, reciprocating and turbine engines, accessories, and equipment relating to fixed and rotary wing aircraft and fixed wing pressurized aircraft; thorough knowledge of non-destructive testing techniques and special manufacturing processes as utilized in present day aircraft construction; thorough knowledge of modern inspection techniques including statistical quality control; good knowledge of financial, material and personnel administrative requirements and practices in order to estimate resources and inspection requirements; skills to conduct technical investigations, write reports, negotiate or guide the aviation industry in matters relating to airworthiness; thorough knowledge and skill in evaluating organizations, facilities operations and capabilities, especially in the field of quality control, of manufacturing and maintenance facilities including the skill to recognize and evaluate defective workmanship, defective or unsuitable aircraft materials, and non-conformance to engineering drawings or specifications; experience in directing and administering personnel.

Technical Responsibility — C3 / 250

The work is of a complex and involved nature, as it requires the individual appraisal and evaluation of each applicant, tailored to the specific nature of approval sought. This includes planning, co-ordinating and directing airworthiness inspections and related activities in the region. The work requires the exercise of initiative and judgement to authorize changes in procedures and to deal effectively with senior management officials of large manufacturing companies.

The activities affect departmental approvals at aeronautical product manufacturing, overhaul and repair facilities, the certification of such products quality control systems, training programs and the departmental relationships with these organizations including foreign governments. Errors in judgement in planning inspection projects, scheduling work, monitoring inspection activities and providing advice, would result in the following: approval of inadequate plant facilities; approval of inadequate quality control systems governing manufacturing, repair and overhaul, and maintenance facilities; certification of inferior aeronautical products; approval of unqualified inspectors; issuance of licenses and endorsements to unqualified Aircraft Maintenance Engineers. The above could lead to the certification of unairworthy aircraft with the possibility of catastrophic results, as well as costly modifications and repair charges to aircraft

Working Conditions — 1 / 10

The work occasionally requires the inspection of aircraft, aircraft maintenance facilities, and manufacturing plants, resulting in exposure for varying periods to dirt, noise from riveting, aero engines and machinery glare from welding; fumes from aviation fuel, degreasing solvents and acid baths, exposure to severe cold or heat while inspecting

Degree/
Points

aircraft and facilities in exposed locations. Occasionally required to be away from home for significant periods. Aircraft inspection also involves climbing and working from ladders and working in awkward positions in restricted areas.

Supervision 3 / 105

The work requires planning and assigning work to Airworthiness Inspectors to ensure that the requirements of optimum regional coverage are attained. Establishes work priorities for subordinates. Develops staff training plans. Provides advice and guidance of a technical or procedural nature when requested and ensures that all departmental personnel policies are properly applied. Recommends transfers and disciplinary action.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 6 Level: 6

Descriptive Title: Senior Defects Investigator - Commercial and Special Vehicles Point Rating: 602

Reports to: Chief, Public Complaints, Recalls and Defect Investigations

Position Profile:

This is a headquarters position and is one of three senior defect investigators reporting directly to the Chief, Public Complaints, Recalls and Defect Investigations who is the government's senior technical authority in motor vehicle safety defect matters. Major investigations which are the responsibility of this position are critical to the success of a national program affecting the safe operation of motor vehicles. All types of motor vehicles and tires covered by the Motor Vehicle and Motor Vehicle Tire Safety Acts from heavy trucks and buses to all terrain vehicles are the subject of investigations. The investigations involve the formulation and testing of hypotheses regarding the nature and cause of the defect based on multiple information sources and innovative testing and investigation techniques and are completed by ensuring appropriate action is taken by responsible authorities.

Duties	% of Time
Plans, develops and performs major motor vehicle and motor vehicle component systems defect investigations, examinations, tests and defect related accident investigations; conducts interviews of involved parties; reviews and evaluates manufacturers' design, manufacturing, testing and quality control documents and other information; recommends or authorizes specialty laboratories or private engineering firms to perform specific analyses, testing, design and fabrication; discusses the planning and conduct of investigations with manufacturers, foreign government investigative agencies and other interested parties; evaluates the opinions of experts; recommends, discusses and evaluates corrective actions.	55
Provides expert advice and witness testimony on specific vehicle performance problems or defects; recommends improvements in Provincial vehicle inspection and licensing procedures and Federal or international vehicle safety standards and test methods.	30
Utilizes the powers of seizure; prepares the Crown's case against the company; testifies in court.	15

Specifications	Degree/ Points
Skill and Knowledge	5 / 283

Comprehensive knowledge is required of motor vehicle design (including vehicle and tire safety standards), manufacturing, operation, and testing, of the documentary and quality control systems used by industry to record and monitor these processes and how manufacturers deal internally with product problems. Skill and experience in designing or modifying test devices and procedures for both vehicles and components are also required.

Degree/
Points

A detailed knowledge of commercial and special vehicles, particularly vehicle dynamics, is essential. A complete understanding of the techniques of motor vehicle accident investigation is required with the skills to apply them in a large number of multi-variable situations. There is also a requirement for knowledge and associated skill to apply the scientific method to the collection and verification of evidence from Canadian and international sources in order to meet all the requirements of dealing on an equal footing with manufacturers and preparing effective case files for charges laid under the Motor Vehicle and Motor Vehicle Tire Safety Acts. A substantial background in failure analysis is needed in order to properly utilize laboratory resources. Knowledge of project management techniques is required to effectively co-ordinate and control the progress of investigation projects. Skill to deal effectively with senior management and engineering officials of motor vehicle manufacturers, members of the general public, police, coroners, foreign government officials, and the media is also necessary.

Technical Responsibility — C3 / 250

The investigator determines the methods by which he will obtain the evidence necessary to establish the existence of a safety related defect, prepares publicly accessible work plans for investigation projects and co-ordinates and controls the resources required to successfully complete the project within defined time restraints. Such resources include contract engineering consultants, vehicle and component test facilities, specialized labo ratories and field investigators under contract. Continually monitors technological advances to ensure appropriate modifications are made to project plans. Develops and implements new test methods and procedures and novel approaches to obtain evidence for safety related defect investigation projects. Case summaries with recommended actions are prepared for review with the division chief when manufacturers dispute investigation conclusions. The position requires the responsible use of the powers of entry, search, and seizure vested in the investigator by the Minister under Section 10(1) of the Motor Vehicle Safety Act and the Motor Vehicle Tire Safety Act.

Work products directly affect the safety of the public in Canada and other countries and the financial position and vehicle designs and production processes of domestic and foreign vehicle manufacturers. Normally the end result of an investigation project is a vehicle recall or a charge under the applicable act. Documented recommendation for new or modified, national or international, vehicle safety standards or test methods may follow investigation activity. Investigation projects affect the outcome of criminal proceedings against individuals, the recommendation of coroners, juries, the reputations of manufacturers in the marketplace, and the outcome of civil litigation. Investigations may attract considerable media attention and errors in judgement can result in departmental embarrassment, needless expenditure of resources, or a significant delay in the disclosure of a safety related defect resulting in unnecessary deaths, injuries or property damage.

Working Conditions — 3 / 54

The work involves exposure to uncontrolled hazards during on scene accident investigations and vehicle testing. Lifting of heavy objects, use of heavy tools and travel to gather evidence across Canada is required. Outdoor investigation work is carried out regardless of weather conditions. Protective clothing is required during testing.

	Degree/ Points
Supervision	1 / 15

There is no continuing requirement for the supervision of others.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 7 Level: 6

Descriptive Title: Detachment Quality Manager Point rating: 623

Reports to: Detachment Commander (303 Canadian Forces Technical Services Detachment)

Position Profile

This is a field position accountable for the management of 300-350 contracts placed with a broad range of industrial firms in the Southern region of Ontario for the supply of mechanical, electronic, electro-mechanical, aviation, textile, food and marine products and services. Prime interface with industry and other Department Managers on all quality, technical and logistics matters related to contracts.

Duties	% of Time
Reviews and analyses contracts to identify material and services to be provided and to prepare for post award conferences with contractors to evaluate plans to fulfill a contract; implements the departmental Quality Assurance Program; accepts or rejects contractor inspection plans/quality programs; monitors corrective action requests raised within his/her sphere of responsibility; convenes and/or attends meetings with contractors and other authorities to discuss and resolve contractual, engineering and other logistics problems; signs progress claims with respect to quality.	40
Approves and/or monitors the approval of minor variations from contractual engineering requirements by assigned staff; provides quality assurance comments and prepares engineering comment on design change requests; evaluates and accepts or rejects engineering and technical investigation reports prepared by contractors; reviews and assesses work authorization, work control and cost control on 20-30 Repair and Overhaul contracts.	30
Monitors the control of departmental stores placed in custody of industrial firms and enforces corrective action as applicable; certifies invoices, totalling approximately $1 million in value per annum.	10
Supervises a staff of 13 through 4 subordinate supervisors engaged in assuring quality of material and services produced by industry and the provision of support services on behalf of the Department; recommends training, completes performance evaluation reports, and recommends leave and disciplinary action.	15
Performs other duties such as: recommending changes to quality, technical and logistics procedures and writing detailed technical reports.	5

Specifications	Degree/ Points
Skill and Knowledge	5 / 283

The work requires a thorough knowledge in electrical/electronic and mechanical engineering technology including mathematics, physics, DC and AC theory, mechanics, properties of materials and theory of machines; a good knowledge of manufacturing methods and procedures and their application to industrial organization, quality assurance principles and practices, of statistical sampling and of quality assurance of software; detailed knowledge of the departmental Quality Assurance System and QA procedures and the NATO/Military Quality Specifications; a good working knowledge of Special Processes used in Manufacturing and Computer Aided Manufacturing used by industry; thorough knowledge of the Inspection and Test Equipment used by industry to determine conformance; a thorough knowledge of contracts and the Contracting Process; of the departmental Repair and Overhaul Management System; Management Practices and Principles; and the departmental Personnel and General Administration regulations and directives.

Skill is required to assess industrial quality programs; to plan, develop, organize, direct and control quality assurance programs on large complex contracts; to resolve technical, quality, logistics and personnel problems; to assess workload, forecast manpower, identify training requirements, schedule work, conduct on-job-training and supervise technical, quality, logistics and administrative personnel. Also, skill is required to use drawings, automatic test equipment and other inspection and test equipment.

Technical Responsibility	C2 / 203

The Detachment Quality Management responsibilities which cover Quality Assurance, Technical, Logistics and Contract Administration activities are carried out in accordance with guidelines ranging from broad to detailed. Initiative and judgement is necessary to prepare plans and programs to carry out quality assurance, ensuring that only significant contractor operations and product characteristics are included **in** the program. There is a frequent requirement to modify normal quality assurance procedures to take advantage of changes in contractor operations or contract conditions. Technical initiative and judgement is necessary to approve contractor recommended levels of repairs and contractor requests to deviate from the drawing and specification requirements. Initiative and judgement is also necessary to request contractor corrective action with respect to quality and R&O operations and the withholding of material release and payment where non-compliance is significant. Initiative and judgement is necessary to forecast budgets and to exercise budgetary control of allotted funds to carry out work. There **is** also an integral requirement for continued review and assessment of QA plans and programs and to make changes to coincide with new policy and/or confidence levels experienced in contractor operations. As primary departmental contact with industry, other government departments and foreign governments on assigned contracts, initiative and judgement is required to represent the department on all contractual matters. Unusual problems such as those that might lead to the withdrawal of a contractor's departmental recognition status are referred to the supervisor with appropriate documentation and proposals for action.

A poor or wrong decision could adversely affect contractor cash flow, adversely affect departmental operations, result in poor quality material finding its way into the Department's inventory which could lead to personal injury or loss of life through the delivery of defective military operational material, loss of dollar value to the department and loss of prestige and goodwill with industry and foreign governments.

	Degree/ Points
Working Conditions	2 / 32

Approximately half of the work involves the direct supervision of Quality Assurance representatives working in industrial environments and personal contact with industrial managers. This requires regular visits to a wide range of manufacturing facilities engaged in metal fabricating, composites, textile manufacturing and repair and overhaul of defence equipment. In addition to exposure to varying weather and traffic conditions while traveling between contractor's plants, exposure to dust, fumes, heat and noise is normal. While supervising or conducting investigations, intermittent standing, walking, bending and climbing is required.

Supervision	3 / 105

There is sustained requirement for planning and supervising the work of a staff of 13 through 4 subordinate supervisors engaged in quality assurance, technical, logistic and administrative duties. There is a significant responsibility for the effective deployment of staff to meet objectives, to identify training requirements, to establish and maintain work standards and to counsel employees.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 8 Level: 6

Descriptive Title: District Manager, Weights and Measures Point Rating: 611

Reports to: Regional Manager

Position Profile

This position is in charge of the district of Winnipeg; plans and schedules inspection program and projects; supervises staff engaged in the inspection of all types of weighing and measuring devices, for compliance, and of commodities, sold by the weight or measure, to insure correct measurement and marking; administers a budget; trains inspection personnel. Issues warning letters, proceeds to show-Cause hearings, reviews and coordinates enforcement action files, and recommends prosecutions. Provides interpretation of the Act and Regulations and advice to personnel, dealers, traders and officials of provincial and municipal governments.

Duties	% of Time
Manages the inspection program and projects, in the district, covering the manufacturing, importation, installation, maintenance, repair, overhaul and the use of weighing and measuring devices; assures the observance of established requirements, in accordance with regional and district objectives and programs, legislative provisions and departmental regulations and policies; controls equipment and financial resources; assesses the adequacy of established inspection procedures and policies; and recommends modifications to existing or development of new ones.	40
Coordinates the work of district staff; ensures adequate inspection coverage as well as effective use and development of staff; provides technical expertise, to the resolution of general or specific problems with devices, and ensures staff training regarding changes in technology.	30
Provides advisory departmental information and liaison services to officials, manufacturers, traders, consumers and media; represents the department and interprets regulations requirements and inspection directives and procedures, affecting weighing and measuring instruments.	20
Performs other duties such as: directing, coordinating and controlling the Commodity/Service Inspection Program as it relates to Weights and Measures responsibilities and Consumer Packaging and Labelling Act and Regulations, and the Feeds, Seeds, Fertilizers and Pest Control Products Acts and Regulations; carrying out the examination of scales and commodities in retail stores or industry, either as a result of a consumer, or other complaints, or as routine check for trade protection; taking enforcement actions, in accordance with the departmental enforcement policy; attending court as a witness; participating in contract negotiations on the repair of government owned and the rental of privately owned transportation and inspection equipment.	10

Specifications	Degree/ Points
Skill and Knowledge	4 / 224

The work requires a thorough knowledge of the details of assembly, the working principles of weight and measure devices, either mechanical, electrical or electronic, manufactured, imported, installed, serviced, repaired or overhauled, used in trade; a good knowledge of metrology, the properties of different fluids, principle of levers and its application, utilization of inspection instruments, of mathematics, and safety rules; a thorough knowledge of the Weights and Measures Act and Regulations, the Consumer Packaging and Labeling Act and Regulations and the Feeds, Seeds, Fertilizers and Pest Control Products Acts and Regulations; the Departmental directives, and a practical knowledge of the financial practices governing the appropriation of supplies and services, of the preparation of a budget, equipment management, collective agreements, training methods and management techniques, necessary to manage a district office.

Management skill is necessary to supervise district staff, especially when it is decentralized, either as resident or area inspector. Skill must be shown in inspecting and verifying measuring devices and evaluating the results of tests, in order to decide if an installation is satisfactory; discovering fraudulent tampering or unauthorized modifications to weighing or measuring devices; in reading blueprints; maintaining good relations with the public, officials of companies, store directors, manufacturers and dealers, both in management and advisory capacities.

Technical Responsibility	C3 / 250

Being the Departmental representative in the district, judgement must be exercised in contacts with officials of organizations, industry and agencies subject to inspection, to resolve disputes and conflicts, to provide interpretation on Legislation and Regulations and to recommend modifications to inspection procedures. Initiative and judgement are required in managing the district inspection program: there is a requirement to adjust inspection techniques, methods or procedures in order to meet local requirements. Recommendations concerning modifications to regional or national program requirements are made to the Regional Manager and Specialists.

The work impacts upon the effectiveness of the Weights and Measures program within the District, the population and industry served, and the effectiveness and provision of trained staff.

Working Conditions	2 / 32

Although the work is performed mostly in an office environment, it also requires visits to a wide range of facilities, with exposure to several disagreeable conditions, such as handling 20 kg standard weights, standing, walking, exposure to dust, obnoxious odors and the wear of protective clothing.

Supervision	3 / 105

Manages and coordinates the utilization of human resources directly and, in Brandon, through an area inspector; identifies training requirements, and controls their implementation; establishes working standards; provides advice and guidance to 11 subordinates.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 9 Level: 6

Descriptive Title: Marine Surveyor, Electrical Point Rating: 572

Reports to. Senior Surveyor

Position Profile

This position is in a Regional Office. Inspections are conducted in manufacturers' plants associated with the construction of major items of electrical equipment. Surveys on board ships constitute in-depth inspections of electrical equipment and machinery and include small fishing vessels, large fishing vessels, tugboats, cargo vessels, passenger vessels, offshore supply vessels and mobile offshore drilling units, some having installed generating capacity in the order of 30,000 KW at voltage levels up to 13,200 Volts.

Duties	% of Time
Inspects ships' machinery, electrical equipment and installations, generators, motors, switchboards, control panels and static power supplies, life saving, firefighting and other statutory equipment during design, manufacture, construction, modification, installation, overhaul or repair to ensure compliance with legislation, regulations, standards, engineering practices; examines and approves complex design plans and calculations submitted by electrical engineers, marine engineers and naval architects, most of which are prepared and submitted by registered professional engineers, for compliance with regulatory requirements; assesses manufacturers' proposals for modifications of approved designs and plans and authorizes such departures or recommends alternative procedures and techniques; attends the trials of ships; makes calculations and measures; conducts tests; provides expert advice regarding the interpretation and implementation of regulations and standards; issues inspection certificates.	80
Carries out investigations into ships accidents and infractions of pollution regulations covering air and water pollution by ships, all to establish cause, responsibility and liability; initiates prosecution action and appears as expert in court; writes reports and recommendations.	15
Performs other duties such as: evaluating draft legislation and regulations.	5

Specifications	Degree/ Points
Skill and Knowledge	5 / 283

The work requires a thorough knowledge of the principles and practices of the design and construction, repair and operation of a variety of ships and a sound knowledge of marine engineering and electrical principles and practices. A thorough knowledge of the latest departmental and international regulations governing the design, construction, modification and repair of ships and a broad knowledge of shipping industry operations and procedures is also necessary. The work requires skill in evaluating design plans, carrying out investigations and writing detailed technical reports. Specialist electrical knowledge and the skill to translate this knowledge into the development of new safety standards is a significant requirement.

Degree/
Points

Technical Responsibility B3 / 197

The work involves organizing and carrying out the inspection of ships during construction, modification, repair and periodically while in service, participation in accident and pollution investigations and inquiries and the dissemination and interpretation of current national and international regulations and technological programs to senior officers of regional staff and the shipping industry. Problems encountered in the course of inspections are normally resolved by the surveyor on own authority and frequently require the development of inspection criteria based on the interpretation of regulatory requirements, intent of directives or on the basis of the application of basic electrical engineering and design principles.

Errors in judgement in carrying out inspections can cause delay in construction, modification and repair processes and incur undue heavy expenses to shipyards and ship owners, as well as resulting in certification of unsafe ships. Dissemination and interpretation of current national and international regulations and technological programs to regional senior officers and the shipping industry will directly affect the inspection programs in the region and will have a cost effect on the construction and modification of ships to meet crew safety requirements. Errors in information and recommendations can result in incorrect inspection criteria being adopted with resulting embarrassment to Branch and Department, heavy expenses to ship owners and the certification of unsafe ships. Accuracy during examination of design submissions for approval is critical both to the industry in terms of millions of dollars if mistakes are made during the examination and approval process and also to the safety of the vessel, crew and passengers. Failure to carry out the above noted tasks and inspections in accordance with the numerous Acts, Regulations and International Conventions administered by Ship Safety Branch and also with the utmost competence could cause a major incident involving the loss of life, could contribute to the loss of vessel or could cause the equipment to be removed and repaired or modified at considerable cost to the manufacturer. Recommendations are made in investigations arising from accident and pollution cases and with respect to the issue of certificates of competency to marine engineers. Decisions and recommendations affecting the issue of departmental inspection certificates approving the safety and seaworthiness of ships can result in requirements for costly changes in equipment components, construction or repair procedures. Recommendations are made to the Regional Manager, via the Senior Surveyor and to headquarters officials at the senior technical level.

Working Conditions 4 / 77

The work frequently requires inspection of ships' hulls, machinery spaces, holds and other areas of ships with poor lighting and ventilation where there is exposure to dirt, fumes, odours, and inclement weather. Observing welding, equipment installation and other activities associated with ship construction and overhaul results in frequent exposure to falls, fractures, burns and other injuries from moving and falling objects.

Supervision 1 / 15

There is no continuing requirement for the supervision of other employees.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 10 Level: 6

Descriptive Title: Regional Accident Investigation Officer Point Rating: 566

Reports to: Chief of Operations

Position Profile

The position is located in a district office of a regulatory agency and is one of a number of intermediate inspector positions providing technical expertise in respect of railway operational safety. It is the focal point of all accident investigative activity occurring within one of **six** districts across Canada.

Duties	% of Time
Investigates train derailments, collisions, crossing accidents and other classes of accidents/incidents to establish causative factors and to provide information for accident data analyses, trend determination and standards development; conducts formal inquiries into catastrophic accidents when duly appointed to do so with statutory powers to enter upon and inspect railway property, works structures and rolling stock, summon witnesses, administer oaths and compel production of evidence, material, plans and documentation; ensures necessary precautions are taken at accident scenes to safeguard the public and railway employees; interviews train crew members, other railway employees, police, road authorities and witnesses to develop inter-relationships of applicable laws or regulations, signal indications, track-train dynamics, track profile and train handling characteristics; determines extent of rules compliance and integrity of signalling, operating and communications systems; evaluates adequacy of track geometry and structure by examining line, surface, cross elevation, rail, joints, fastenings, ties, ballast, turnouts and gauge; inspects motive power and car equipment for evidence of defective wheels, axles, trucks, shifted lading, which may be a contributing factor.	35
Determines nature and extent of additional resources required to investigate specific types of accidents and provides project leadership; establishes need for applying and identifies parameters of simulator models to establish types and probable magnitudes of forces, speeds, which existed at time of accident; determines need for testing defective equipment or infrastructure components to establish reason(s) for failure, i.e. design problem, manufacturing deficiency or service fatigue; analyzes evidence, draws conclusions and formulates recommendations on remedial action required including the suspension or dismissal of railway employees found to be negligent or willful in respect of an accident.	25
Prepares detailed reports of accidents outlining full particulars relating to the causes of and circumstances connected therewith; submits reports to and makes oral presentations before the Railway Transport Committee; participates in reviewing the adequacy of follow-up to recommendations.	20

	of Time
Testifies as an expert witness before Commissions of Inquiry, Coroner's Inquests and Courts of Law; provides technical advice to public hearing panels; assesses the adequacy of protection afforded the public at rail/highway crossings; acts as a "Safety Officer" pursuant to appointment by the Minister of Labour for purposes of administering provisions of the Canada Labour Code governing occupational safety and health of employees working on trains; counsels members of safety and health committees and authorizes commencement of wreck-clearing operations following accidents involving employee fatality or serious injury.	20

Specifications

	Degree/ Points
Skill and Knowledge	4 / 224

The work requires a general knowledge of legislation, regulations, rules, policies, practices and/or procedures pertaining to the design, manufacture, maintenance, inspection and testing of rolling stock, infrastructure and signaling systems. A more detailed knowledge is required in respect of the operating rules, train control methods, marshalling requirements, train handling and accident investigation techniques. The work requires skill in giving evidence at public hearings and court proceedings. It also requires skill in evaluating validity of information provided by interviewees. Skill is required in writing detailed technical reports.

Technical Responsibility	C3 / 250

Initiative and judgement are required in coordinating the gathering of facts, determining actual cause(s) of accidents and in deciding the nature and extent of corrective action required. There is likewise considerable latitude for exercising authoritative opinions when fulfilling the role of a "Safety Officer" as, for example, in determining whether an employee may refuse work because danger exists in the workplace or when issuing directives to rectify hazardous situations. Recommendations influencing national programs or which have broad scope in application are generally formulated after consultation with appropriate agency officials. Findings, conclusions and recommendations are reported directly to the Commission in the case of specific major railway accidents.

Errors in judgement can have a direct influence on the quality of decisions, orders and regulations rendered by the Commission resulting in inconsistencies, inequities of treatment and potential negative impacts on the image of the regulatory agency. Errors in judgement during emergency situations at accident sites can jeopardize the safety of railway employees and the general public as well as being a hindrance to program objectives as would be the case in erroneously assessing the need for evacuation or in prematurely authorizing the disturbance of evidence at accident sites. Recommendations formulated and which are adopted by the Commission frequently involve the revision to standards which are binding upon railway companies and can involve the expenditure of millions of dollars, hence placing a premium on the development of feasible, practical and cost-effective safety measures.

Degree/
Points

Working Conditions 4 / 77

The work requires frequent on-site examination of accident scenes necessitating inspection of derailed and damaged rolling stock in scattered configuration. Although protective clothing and equipment is provided, precautions must be taken to avoid serious injury or death resulting from the ignition and violent rupture of tank cars containing hazardous products such as butane. There is also considerable opportunity for exposure to flammable liquids, poison gases, corrosive materials, oxidizers and radioactive materials at accident sites. Accidents occur at all hours of the day or night, in all weather conditions and frequently require attendance for extended periods of time with little or no rest.

Supervision 1 / 15

There is no continuing requirement for the supervision of others.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 11 Level: 5

Descriptive Title: Narine Surveyor (Small Vessels) Point Rating: 536

Reports to: Senior Marine Surveyor

Position Profile

This is a regional position reporting to the Senior Surveyor in a district office of the Canadian Coast Guard Ship Safety Branch who is responsible for the management of the Ship Safety and Pollution Prevention programmes in the District. Major inspections and investigations which are the responsibility of this position are critical to the success of national programs designed to minimize shipping casualties, crew accidents, loss of property and to ensure the safety of ships and the safe operation of shipping by qualified personnel; to provide an effective marine environmental protection capability and to prevent casualty recurrences. The inspections and investigations involve the enforcement of numerous Acts, Regulations and International Conventions and are carried out to ensure compliance with prescribed requirements and that appropriate corrective or legal action is taken in cases of non-compliance.

Duties	% of Time
Inspects motor driven ships not exceeding 150 gross tons under construction and thereafter as periodically required with respect to construction, seaworthiness, modifications, overhauls, repairs and condition of hulls and superstructures, machinery, safety equipment, electrical systems and equipment, ventilation and piping systems; verifies that ships are staffed with certificated officers and crew who are sufficient and efficient to carry out their normal and emergency shipboard duties; inspects items of other ships as directed by the Senior Surveyor; inspects the safety equipment of all ships; issues inspection certificates.	50
Inspects and tests cargo gear and operations, cargo holds and working areas; informs ships' officers, ships' owners and the agents of unsafe and unacceptable equipment, conditions or working practices; acts as a port warden and inspector of dangerous goods.	30
Examines candidates for certificate of competency; issues certificates, authorizations and exemptions.	10
Performs other duties such as: investigating accidents; surveying new or existing ships, pleasure craft and other vessels for tonnage measurement.	10

Specifications	Degree/ Points
Skill and Knowledge	4 / 224

The work requires a thorough knowledge of the practices and principles of the design and construction, repair and operation of small vessels and a sound knowledge of marine engineering principles and practices. A thorough knowledge of the latest departmental regulations governing the design, construction, modification and repair of small vessels.

Degree/
Points

The work requires skill in evaluating design plans, carrying out inspections and investigations and writing detailed technical reports with respect to the development of safety standards dealing with the design and operation of small vessels which are now coming within the scope of new legislation regulating their construction, inspection and operation.

Technical Responsibility — B3 / 197

The work involves organizing and carrying out the inspection of small vessels during construction, modification, repair and periodically while in service, participation in accident and pollution investigations and inquiries and the dissemination and interpretation of current national regulations and technological programs to senior officers of regional staff and the regulated industry. Problems encountered in the course of inspections are normally resolved by the surveyor and frequently require the development of inspection criteria based on the interpretation of regulatory requirements, intent of directives or on the basis of the application of basic design principles.

Decisions and recommendations affecting the issue of departmental inspection certificates approving the safety and seaworthiness of ships can result in requirements for costly changes in equipment components, construction or repair procedures. Errors in judgement in carrying out inspections can cause delay in construction, modification and repair processes and incur undue heavy expenses to shipyards and owners, as well as resulting in certification of unsafe vessels. Dissemination and interpretation of current national regulations and technological programs to regional senior officers and the regulated industry will directly affect the inspection programs in the region and will have a cost effect on the construction and modification of vessels to meet safety requirements. Errors in information and recommendations can result in incorrect inspection criteria being adopted with resulting embarrassment to Branch and Department, heavy expenses to owners and the certification of unsafe small vessels. Recommendations are made to the Regional Manager via the Senior Surveyor and to headquarters officials at the senior technical level.

Working Conditions — 5 / 100

The work requires the on-going inspection of ships' hulls, machinery spaces, holds and other areas of ships with poor lighting and ventilation and where there is exposure to dirt, fumes and odours. Attendance during trials requires significant exposure to extreme weather conditions and hazardous instability of small craft. Observing welding, equipment installation and other activities associated with ship construction and overhaul results in frequent exposure to falls, fracture, burns and other injuries from moving and falling objects.

Supervision — 1 / 15

There is no continuing requirement for the supervision of other employees.

Bench-mark Position Number: 12 Level: 5

Descriptive Title: Airworthiness Inspector - District Office Point Rating: 490

Reports to: District Superintendent

Position Profile

Responsible for the surveillance of maintenance activities related to all private and small air carrier aircraft in a specific geographical district. This includes the issuance and suspension of certificates of airworthiness and the inspection of small air carrier maintenance organizations. A district office is responsible for roughly 150 aviation facilities, 300 Aircraft Maintenance Engineers (AME) and 1,500 Aircraft.

Duties	% of Time
Conducts initial and on-going audits, inspections and investigations of companies and individuals holding or applying for air carrier Operating Certificates, for hire or reward, or specialty flying and non-operating aviation support firms engaged in aircraft maintenance/repair/modification; provides advice and information on regulations and airworthiness standards; reviews and audits for approval purposes company facilities and qualified human resources, aircraft inspection organization, Maintenance Control Manuals and Programs, and any outside contracts for the maintenance of aircraft; inspects aeronautical products and the repair and overhaul work in accordance with specifications, drawings and standards; advises air carrier management of any deficiencies, specifies corrective measures, writes reports and makes recommendations to the supervisor for the issuance, denial or suspension of a certificate; investigates infractions and recommends regulatory action (suspension of license, letter of warning or court action).	35
Reviews engineering reports and drawings describing modifications or repairs to be made in compliance with airworthiness and requirements; checks work reports and certifications relating to repairs, modifications and overhaul of aircraft or aeronautical products; determines that suitable materials and satisfactory workmanship are being used; inspects aircraft; approves particular installations; advises of any deficiencies; detains any aircraft suspected of being unairworthy or unsafe; issues, suspends or re-instates certificates/permits.	25
Evaluates and approves training facilities, training aids, course syllabus and qualifications of course instructors providing familiarization and basic training for AME; determines which technical examinations may be attempted by applicant and grading the examination papers written for the issuance of licenses; re-issues AME licenses; recommends suspension of licenses for incompetence or regulatory violation.	20
Investigates technical failures and complaints from the public; reviews and writes technical reports; takes appropriate action.	15
Appears in court or at enquiries as an expert witness.	5

Specifications

Degree/
Points

Skill and Knowledge — 4 / 224

The work requires a thorough knowledge of the applicable Consolidated Regulations of Canada (Air Regulations) and other airworthiness-oriented legislation, directives and manuals, including Air Navigation Orders, Airworthiness Manual, Engineering and Inspection Manual, Aeronautical Engineering Staff Instructions, Inspection Instructions, and Personnel Licensing Manual; knowledge of airworthiness design standards, including USA Federal Aviation Regulations and Civil Air Regulations applicable to Canadian civil aircraft; good knowledge of international Airworthiness Directives, manufacturer's manuals, service bulletins, service letters, engineering bulletins, Supplementary Type Approvals (STA's) and theory of flight and aircraft operation; thorough knowledge of maintenance and inspection techniques, applicable to airframe, reciprocating and turbine engines, propellers, accessories and equipment, relating to fixed and rotary wing aircraft, and, includes pressurized fuselages and statistical quality control methods; detailed knowledge of the construction, maintenance and systems operation of appropriate types of fixed and rotary wing aircraft.

The work requires ability and skill in conducting technical investigations, evaluating organizations and their operation, writing reports, conducting meetings and providing authoritative guidance to industry personnel.

Technical Responsibility — B3 / 197

The Airworthiness Inspector is required, on a daily basis, to plan airworthiness related work assigned to the District Office function. Decisions are made on the detailed planning of work schedules and the actual conduct of inspection work to ensure that air carriers, specialty operators and aviation support firms continue to comply with regulations, standards and approved maintenance systems.

The daily work necessitates detailed examination of technical and regulatory documents, combined with field inspections to a degree deemed necessary, in deciding whether or not to issue/suspend a Certificate of Airworthiness or Flight Permit, to recommend issuance/ suspension/amendment of an Operating Certificate, to approve/amend a Company Maintenance Control Manual, or, to detain an aircraft judged unsafe for flight, in accordance with delegated Ministerial authority. Actions must be supported by evidence presented in a form suitable for court proceedings. The evaluation of changes in approved company or air carrier organizations including changes in key personnel requires judgement of personnel qualifications.

The inspection of complete aircraft, modifications and repairs is extremely complex, when the diversity of aircraft, equipment and approval status is considered. The inspector must delve deeply to uncover short cuts (e.g. installing unapproved modifications, hiding cracks or unsatisfactory repairs with paint, non-certification of snags, use of unserviceable components) and resolve these problems. Enforcement action is a final, but mandatory, resort when all else fails.

Degree/
Points

The work requires defending actions, or lack of action, in court proceedings. The airworthiness inspector is responsible to confirm compliance with standards and directly prevent an accident (albeit from a technical viewpoint) and can be held responsible legally or morally for contributing to an accident through a mistake or lack of timely action on his (her) part. Work products ultimately reflect on the department in an area of high public visibility and concern (e.g. increasing number of media reports on airworthiness problems).

Working Conditions — 3 / 54

The work requires the inspection of aircraft maintenance facilities and shops, resulting in frequent exposure to dirt, noise, (i.e. riveting, engine run-ups), glare from welding torches, odours from paint, aircraft dope, fuel fumes from de-greasing plants, solvents, electra-plating baths. Extremes of temperatures are encountered at short intervals (i.e. heat treatment shop to aircraft inspection on ramp in winter). Extensive travel is also required.

During aircraft inspection the work requires continual standing, and walking, positioning and working from ladders or stands up to 50 ft. high, frequently working in awkward positions in restricted areas (i.e. inside aircraft wings, tails and undercarriage, wheel wells). Special hazards from high pressure hydraulic system tests are also encountered.

Supervision — 1 / 15

There is no requirement for ongoing supervision of others.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 13 Level: 5

Descriptive Title: Gravimetric Specialist Point Rating: 474

Reports to: Regional Manager (Ontario)

Position Profile

This regional position is the source of technical expertise for the Region; liaises between the Region and the Legal Metrology Laboratory; provides expert advice to dealers and traders; informs and trains inspection personnel on new or modified inspection procedures; does "in situ" approval inspections for the Legal Metrologv Laboratorv; inspects new complex devices to develop inspection procedures.

Duties	% of Time
Provides expert advice to dealers and traders, answers enquiries, instructs staff or makes recommendations on technical, operational or legislative problems relating to device inspection, commodities and services inspection programs, enforcement policies, calibration of gravimetric and linear standards, requirements, pertaining to design, construction, performance, installation or use of new devices and equipment; develops new inspection procedures; recommends specialized test equipment, supervises its construction and demonstrates its use; decides on temporary action and corrective measures to be taken.	30
Performs the inspection and tests of highly complex, modified, new types or new application of weighing and measuring devices and systems and the required surveillance of devices submitted to the Legal Metrology Laboratory for original "type approval" tests, to ensure compliance with legislative requirements on design, construction, composition, performance, installation or use; makes recommendations to standards laboratory and dealers, with respect to concepts and prototypes, approval, temporary approval, conditional approval or refusal.	30
Develops, coordinates and implements training programs on new devices, new applications, changes in technology, inspection procedures, new test equipment, legislation and related safety aspects.	20
Investigates the use of non approved devices systems, new applications and changes in trades practices in the marketplace, and prepares detailed reports; reviews prosecution dockets pertaining to offences involving mass and linear measurements, proposes appropriate arguments, provides data to substantiate the prosecution and appears in court as an expert witness to present testimony on technical matters.	20

Specifications

Degree/
Points

Skill and Knowledge — 4 / 224

The work requires an in-depth knowledge of design criteria, construction and assembly methods, installation and performance characteristics of all devices, systems and interrelated systems, and their components in the measuring fields; an elaborate, and detailed knowledge of all calibration methods and means, for all devices and systems used in trade; a working knowledge of maintenance manuals, of relevant service schedule and of related servicing industry; a sound knowledge of principles of physics, mathematics, chemistry, electricity, electronics, shielding, communication, data transmission and an in-depth knowledge of their application to the measuring devices and techniques.

It requires a knowledge of a large variety of technical documents such as all current inspection procedures, test methods, operation manual for test standards and measuring devices, trade practices, including the latest developments. It also requires an in-depth knowledge of a variety of legal requirements, from Weights and Measures Act, Packaging and Labeling Act, Regulations, Ministerial specifications, Departmental directives and policies, and enforcement actions. It requires a sound knowledge of the same documents, for neighbouring countries, and also their international version.

The work also requires the skill to instruct, train, guide, advise, or convince; to monitor projects, to limit regulatory impact on the manufacturers, and liaise with suppliers, traders, consumers and organizations; to organize and conduct highly sophisticated tests; to analyze performance, identify trends, anomalies, areas of concern, effectiveness of methods, unsafe techniques and areas for improvement; to update methods, change procedures, and create new methods, adapted to changes in technology; to decide, under pressure, to recommend device approval, and to elaborate revised procedures, in situ during the course of tests and controls.

Technical Responsibility — C2 / 203

Initiative and judgement are required when providing technical advice and guidance to officials of own and other departments, industry, and organizations and field staff while respecting a high degree of confidentiality to competitive groups, or when potential sales of equipment and systems can involve millions of dollars; when implementing projects to evaluate design, construction, installation and use of new and modified weighing systems with time restrictions and limited methods or equipment, and decide whether a device is ready for initial inspection and determine special tests to determine the ability of the device or systems to maintain their accuracy; to modify techniques or methods, to adapt to technology, authorize changes or request modifications delaying project when representing the Department with suppliers, manufacturers from Canada or foreign countries; when calibrating standards, used by the manufacturers, to calibrate weighing or measuring devices. There is a requirement to modify techniques and authorize changes in inspection procedures, due to changes in technology or the introduction of new devices.

Decisions impact upon the effectiveness of the Regional inspection program, industry served, and effectiveness of regional staff. Errors in judgement in the verification of non-approved devices or application of wrong tolerances could result in considerable expense to manufacturing or commercial concerns involved, not only for the repair of devices, but monetary losses, at all levels of their trade, besides embarrassment to the

Degree/
Points

Department. Errors of judgement, on the occasion of a complaint inspection, pertaining to fraudulent practices, could result in costly prosecutions and unfortunate consequences to the Department's reputation. Errors in the calibration of standards could result in inexactitude, in district inspection programs, tarnish the Department's image and have disastrous financial effects on that trade and to the public, considering the fact that devices have been inspected with false standards.

Working Conditions 2 / 32

As some of the work can be performed in an office environment, part has to be in situ, which exposes occasionally to disagreeable conditions of work: having to crawl under scale structures; frequent exposure to grain dust, in feed mills, obnoxious odors in slaughter houses, paint manufactures, paper mills, refrigerated meat plants.

Supervision 1 / 15

There is a requirement to instruct other inspectors how to perform inspections and to demonstrate techniques and methods.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 14

Level: 4

Descriptive Title: Operations Supervisor, Weights and Measures

Point Rating: 430

Reports to: District Manager

Position Profile

As a working supervisor, inspects complex weighing and measuring devices, and commodities sold by weight and measure at different levels of trade. Trains and provides advice and guidance to personnel, dealers and traders; interprets the Act and Regulations and enforces these; investigates complaints from all 1Bv In of trade and consumers

Duties	%of Time
Plans, supervises and evaluates the activities of nine inspectors, and one heavy-duty truck driver engaged in the inspection and testing of all types of simple and complex mechanical, hydraulic and electronic weighing and measuring devices and systems; provides on-the-job training on inspection procedures of either simple or complex gravimetric or volumetric devices; advises and offers guidance to inspection staff in problem situations concerning the installation, use and performance of devices, and the weighing and measuring of commodities.	30
Plans, organizes and conducts initial field and factory inspections which are used as models for future inspections, and on-site inspections involving complex mechanical, electronic and hydraulic weighing and measuring systems and devices used in commercial transactions, where weight, time, liquid or linear measure is the basis for price determination; maintains an effective commodities and services inspection program at all levels of trade to ensure that weight, measure and marking of goods and services are exact.	20
Visits organizations subject to inspection for the purpose of identifying program deficiencies, evaluates the adequacy of established inspection procedures and standards, and recommends modifications; evaluates inspection actions and proposals of legal action; assesses test equipment and establishes maintenance schedules for test equipment and vehicles; provides information concerning inspection programs and procedures, the scope and intent of legislation, directives, regulations and the inspection service; explains special requirements and tolerances; recommends equipment and systems best suited for weighing and measuring situations; discusses inspection and test results; suggests alternative and corrective actions.	35
Performs other duties such as: investigating complaints from consumers, traders or dealers involving liquid, linear and time measuring devices and systems, packaged and bulk goods; taking enforcement actions; checking prepackaged products for correct labeling and quantity declaration.	15

Specifications

Degree/
Points

Skill and Knowledge 3 / 166

The work requires a thorough knowledge of the details of assembly, methods of installation and working characteristics of weighing and measuring devices used in trade, of the Weights and Measures Act and Regulations, the Consumer Packaging and Labelling Act and Regulations, and the Feeds, Seeds, Fertilizers and Pest Control Products Acts and Regulations, and of the rules and directives of the department; the work also requires an elaborate knowledge of the principles of metrology, the properties of different fluids, the principle of levers and its applications in simple and complex mechanisms; knowledge of equipment, instruments, mathematics, safety rules, collective agreements and of departmental procedures with regard to legal proceedings; a thorough knowledge of inspection procedures to inspect weighing and measuring devices, and evaluate the results, to determine compliance with installation standards and to detect fraudulent tampering, or unauthorized modifications to scales or measuring devices.

The work requires the skill to plan, control and supervise the activities of a staff of inspectors and to advise them; the skill to read blueprints and drawings; to interpret texts in order to provide assistance and advice; to draft reports and correspondence.

Technical Responsibility B2 / 150

The work requires the supervision of staff engaged in the inspection of a wide variety of weighing and measuring devices. It involves the co-ordination and conduct of inspections.

The activities affect the acceptance or rejection of weighing devices used in commercial transactions. Errors in judgement in the verification of non-approved devices or application of wrong tolerances and inspection of devices with false standards could have financial effects on the public, result in considerable expense to manufacturing or commercial concerns involved, result in inexactitude in district inspection programs, embarrass the Department and tarnish its image. Errors in judgement on the occasion of a complaint inspection, pertaining to fraudulent practices, could result in costly prosecutions.

Working Conditions 3 / 54

The work is done predominantly in an office environment. However, time is spent in carrying out inspection of complex devices, visiting organizations to evaluate inspection programs or procedures, determining installation or usage deficiencies, and making recommendations to traders as well as giving on-the-job training to subordinates. This requires the handling of heavy weights, exposure to disagreeable conditions of work such as having to crawl under scale structures and climb on tank trucks. There is frequent exposure to grain dust in feed mills, noxious odors in slaughter houses, paint manufacturers, paper mills, petroleum products bulk plants, propane gas plants, and refrigerated meat plants.

Supervision 2 / 60

I

As day-to-day supervisor, plans work schedules and assigns duties and tasks to 10 subordinates.

Bench-mark Position Number: 15 Level: 4

Descriptive Title: Installation Inspector, Electricity and Gas Point Rating: 408

Reports to: District Manager

Position Profile

This operational position is one of two installation inspectors reporting to the District Manager who is responsible for the accuracy of measurement and equity of trade of electricity and gas purchased through the measurement at 42,000 commercial, industrial or export locations. Under operating conditions, the inspections involve testing a variety of components within a measurement system, the identification of errors and the determination of the individual error on the total measurement system. Corrective action involves follow-up to ensure compliance and may include ruling on billing adjustments or acting as an expert court witness in prosecutions and civil cases.

Duties	% of Time
Develops a field inspection schedule of Electricity and Gas installations; inspects metering systems for safety, use of properly rated devices, conformance with contractors' drawings and use of approved devices; tests meters and components of metering systems; analyzes test results; advises contractors of required corrective action; calculates systems errors; verifies or rejects installations; determines correction factor for billing; completes reports and follow-ups on corrective actions; shop tests complex devices; applies correction factors for non-standard conditions; verifies or rejects meters; identifies manufacturing defects; evaluates test procedures and equipment; applies statistical sampling methodology; assesses inspection fees.	80
Conducts tests, investigations or audits of utility meter processing systems, facilities, standards, records or billing, quality assurance programs; conducts investigations and tests on disputed metering systems; calculates adjustments; appears in court as an expert witness; writes technical reports; provides on-site training to inspectors in installation and shop inspection procedures; explains scope and intent of inspection requirements to purchasers and contractors.	20

Specifications	Degree/ Points
Skill and Knowledge	3 / 166

Inspection of electricity and gas measurement installations under operating conditions requires a detailed knowledge at the technologist level in: electrical theory including generation, motors, capacitors, circuits; instrumentation theory, including analogue and digital systems, and significance of cumulative errors, mathematics and physics particularly statistics, algebraic expression and operation, trigonometry and vectors, thermodynamics, properties of gas and viscosities. A comprehensive understanding of the legislation, methods and techniques required for inspections as well as a sound knowledge of the maintenance and calibration procedures for a variety of electronic and mechanical

Degree/
Points

standards. A detailed knowledge of the construction and operating characteristics of measuring devices as well as acceptable configuration of circuits, gas piping and installation is required. This also includes knowledge of provincial electric and gas safety codes. A thorough knowledge of quality assurance procedures and audits is necessary for control of the accreditation of meter shops.

Skill and experience are required in: inspecting devices and installations, using a variety of test equipment; evaluating the test facilities and equipment for application of corrective factors; analyzing component and system errors to identify reasons for non-conformance, interpreting blueprints and approval notices, including the ability to trace circuits; calculating and explaining billing adjustments, and preparing technical reports identifying corrective action.

Technical Responsibility — B2 / 150

Judgement and initiative are required to determine if the devices are properly rated and if the test conditions are indicative of normal operations. Judgement and tact are required in scheduling tests which require the interruption of energy supply. Sound judgement is essential to complete inspections accurately and safely. Modification of procedures is required to accommodate changes in technology, such as electronic instruments, tests for which unique standards are unavailable; and in inspecting measurement systems not conforming to usual construction standards. With audits of contractor's quality assurance programs, judgement and initiative are necessary to adequately evaluate the process. Inspection problems for which solutions require deviation from established legislation are referred to the District Manager with recommended action.

Advice is provided to contractors, not only on interpretation of legislation but, also on device calibration and maintenance. Errors could result in significant inequity to the contractor or purchaser. Inspection decisions impact on contractors and purchasers with errors in judgement resulting in substantial billing inequities, unsafe conditions and in the case of incorrectly connecting testing apparatus, damage to contractor's and purchaser's equipment or process.

Working Conditions — 4 / 77

The work requires inspection at a variety of electric and gas contractor shops as well as sites on transmission lines and commercial and industrial locations, requiring extensive travel, frequent exposure to dirt, temperature extremes, and noxious odors. Inspections require continual standing and occasional working from ladders, platforms or in awkward positions. As the work involves testing at live conditions there is exposure to high voltages, high gas pressure, and sour gas requiring use of protective clothing, including emergency air packs. The working conditions also present exposure to back strain, burns and injury from exploding gas.

Supervision — 1 / 15

Required to show other inspectors how to perform duties and tasks.

Bench-mark Position Number: 16 Level: 3

Descriptive Title: Senior Inspector, Weights and Measures Point Rating: 373

Reports to: District Manager in the Edmonton District

Position Profile

This is a working level position responsible for the compliance of weighing or measuring devices and exact weight, measurement and marking of commodities and services using gravimetric or volumetric standards; inspections are carried out on a variety of weighing or measuring devices, either new or repaired, at the manufacturing level or in situ.

Duties	% of Time
Plans, organizes and conducts inspections and tests of all types of mechanical, electronic or hydraulic weighing and measuring devices and systems used in commercial transactions, where weight, time, liquid or linear measure is the basis for price determination, to ensure compliance with the Weights and Measures Act, Regulations, specifications and practices; discusses with dealers and traders the inspection requirements, the scope, intent and changes in procedures and directives, the inspection and test results, the corrective action required; certifies complying devices, issues certificates of compliance or seizes those that are not; assesses and collects inspection fees.	70
Conducts field tests of new types of weighing and measuring devices; submits reports to immediate supervisor or Regional Specialists.	10
Investigates complaints from consumers, traders or dealers; prepares detailed investigative reports and prosecution narratives, and appears in court as a witness for the Crown; operates, maintains and calibrates equipment.	20

Specifications	Degree/ Points
Skill and Knowledge	2 / 108

The work requires a wide knowledge of the techniques and practices associated with the weighing and measuring of commodities in commercial transactions; an in-depth knowledge of the particulars of the construction, methods of installation and metrological characteristics of a large variety of mechanical and electronic devices used in weight, linear and liquid measurement; as well as the Weights and Measures Act and Regulations, the Feeds, Seeds, Fertilizers and Pest Control and the Packaging and Labelling Acts and Regulations, Ministerial directives and inspection procedures, as well as the Departmental enforcement policy; a good knowledge of mathematics, the lever principle and its applications, either simple or combined of the load cell, of the fundamentals of physics in the field of gravity, the expansion and contraction of solids, as well as the characteristics of different fluids, such as petroleum products, milk, water and liquid fertilizers.

Degree/
Points

The work requires the skill to detect fraudulent practices and the unauthorized modification of the measuring devices; to proceed to tests and evaluation of the condition of a device, and the compliance to standards of its installation.

Technical Responsibility — B2 / 150

Judgement and initiative are required in maintaining and calibrating standards, as well as inspecting and verifying, or rejecting, a variety of weighing and measuring devices; investigating consumer complaints relating to products sold on the basis of weight or measure, and conducting more demanding inspections, where modification of procedures is required to accommodate special conditions of use, or changes in technology. Inspection problems requiring deviation from established procedures are referred to immediate supervisor. Advice provided to retailers, manufacturers and officials of governments, and interpretation of legislation and procedures must be appropriate, adequate and precise to maintain equity in the marketplace, as well as the Department's image.

Decisions to not verify devices used in trade may impact on an industrial or commercial organization by temporarily closing down the concern, thereby resulting in delays in a variety of levels of trade from the retail food outlet to the manufacturing concern. If devices, which are outside tolerance, are used in trade, the different levels of trade may be affected. Non compliance or seizure of a device could also cause delays, until repaired or replaced.

Working Conditions — 5 / 100

The position requires constant physical effort, in handling weights of 50 lb. and 20 kg., 20 litre volumetric prover filled with petroleum product.

The work also has to be performed in all kinds of weather; exposure to disagreeable conditions is frequent: having to crawl under scale structures, climb on tank trucks, frequent exposure to grain dust in feed mills, noxious odors in slaughter houses, paint manufactures, paper mills, petroleum products bulk plants, propane gas plants, refrigerated meat plants. It also requires being away from home for significant periods of time.

Supervision — 1 / 15

The work requires accompanying inspector trainees or junior inspectors to give them progressive on the job training.

Bench-mark Position Number: 17

Level: 3

Descriptive Title: Senior Inspector Electricity and Gas

Point Rating: 350

Reports to: District Manager

Position Profile

This operational position is one of two senior inspectors reporting to the District Manager who is responsible for the accuracy of measurement and equity of trade of electricity and gas purchased through the measurement at 972,000 meters. Using statistical sampling techniques, inspections are carried out on a variety of types of new and remanufactured meters, as well as meters in service which are approaching the end of their verification period. In the case of disputed meters, if the device is found beyond tolerance, the inspector rules on the billing adjustment.

Duties	% of Time
Develops an inspection schedule for shop testing of new and remanufactured meters; inspects meters for approval of type, use of proper markings, ratings and multipliers; tests meters; applies correction factors for non-standard conditions; verifies or rejects devices; identifies manufacturing defects; advises contractors of required corrective action; evaluates test procedures and equipment; applies statistical sampling methodology; assesses inspection fees.	80
Investigates consumer billing disputes; examines utility billing records; tests disputed meters; calculates billing adjustments; explains scope and intent of inspection requirements to purchasers and contractors.	10
Performs other duties such as: inspecting, testing, maintaining and calibrating standards and test equipment to reduce instrument error; evaluating and reporting on new standards and shop procedures.	10

Specifications

	Degree/ Points
Skill and Knowledge	2 / 108

The work is a mix of electrical and mechanical technologies requiring detailed knowledge of electrical theory; instrumentation theory including analogue and digital systems; mathematics and physics particularly statistics, algebraic expression and operations, trigonometry and vectors, thermodynamics, and gas properties. A comprehensive knowledge is required of the legislation, methods and techniques required for the inspections as well as a sound knowledge of the maintenance and calibration procedures for a variety of electronic and mechanical standards. Detailed knowledge of the construction and operating characteristics of measuring devices as well as a good knowledge of contractor repair and overhaul procedures is required.

Degree/
Points

Skills are required in: using a variety of test equipment; evaluating test facilities and equipment for proper application of correction factors; analyzing results to identify reasons for non-conformance; interpreting blueprints and approval notices; evaluating new procedures and equipment; and calculating and explaining billing adjustments.

Technical Responsibility B2 / 150

Advice is provided to contractors, not only on interpretation of legislation and procedures but, also in the form of assistance in the calibration of contractor standards. Judgement and initiative are required in completing maintenance and calibration of standards, along with inspections on both domestic and complex meters and instruments on a schedule which does not impede the contractor's work. Modification of procedures is required to accommodate changes in technology such as electronic instruments and tests for which specific unique standards are unavailable. Judgement is required in conducting and explaining disputed meter tests in the presence of both contractor and purchaser. Inspection problems for which solutions require deviation from established legislation are referred to the District Manager with a recommended course of action.

Decisions made impact on both the manufacturer, in the case of identifying defects; the contractor who will have to rework non-conforming devices, and the public, both individuals and corporations, if devices outside tolerances are permitted into service. Rejection of a sample could cause a utility to remove up to 20,000 meters.

Working Conditions 4 / 77

Inspections are carried out in a variety of electric and gas contractor shops with exposure to noxious odors from gas devices, fumes from paint and occasionally exposure to noise from grinders and flashes from arc welding. Most of the work is in a standing position while lifting and positioning devices for testing. As electric meters are inspected on live test boards, there is exposure to shock and burns. The work requires pushing racks of 30 smaller meters to and from the shop test locations. In the case of high capacity gas meters weighing several hundred pounds, a winch is used to position the meter on the test device. The tasks present frequent exposure to possible back strain.

Supervision 1 / 15

Required to show other inspectors how to perform duties and tasks.

Bench-mark Position Number: 18 Level: 3

Descriptive Title: Detachment Quality Representative (DQR) Point rating: 338
Reports to: Senior Quality Representative (305 Canadian Forces Technical Services Detachment)

Position Profile

This is a field position responsible for the provision of Quality Assurance (QA) and related services on 80-100 contracts placed with 30-35 industrial firms in Metropolitan Toronto for the supply of vehicle, and general equipment material and services; it interfaces with Managers and Supervisors of industry to ensure contractual compliance, to provide correct interpretation of the quality, technical and logistics aspects in a contract and to accept materials and services on behalf of the Department and other Governments.

Duties	% of Time
Reviews contracts, evaluates contractor quality control and process procedures, and plans, prepares and implements inspection projects to verify contractor inspections and control of the operating elements that are to ensure compliance with technical and quality standards for the manufacture, modification, overhaul and repair of vehicle and general mechanical combat equipment and systems for the Department, other departments and foreign governments; evaluates engineering change proposals made by contractors and approves or provides recommendation to the engineering authority; recommends approval/disapproval of progress claims; monitors production and advises when delivery will not be met.	35
Conducts physical inspections and carries out surveillance checks of contractor manufacturing and inspection operations to determine that they are adequate to meet contractual requirements; accepts/rejects material and services on behalf of the Department and foreign Governments; requests and monitors action to correct defective material processes or procedures.	30
Provides technical advice, guidance and direction to contractor staff for the repair of equipment and systems on 10-15 repair and overhaul (R&0) contracts placed with 10-15 industrial firms. Reviews repair specifications and provides recommendations to engineering; investigates field complaints and determines warranty liability on Repair and Overhaul on behalf of the Department; authorizes the use of departmental stores to repair/overhaul equipment; scraps departmental stores that are technically beyond repair or uneconomical to repair; monitors the safekeeping of departmental equipment on loan or in custody of industry; certifies R&O invoices, totalling approximately $500,000 per annum; and monitors contractor control of cost to safeguard against uneconomical repair.	25
Performs other duties such as writing detailed technical reports; monitoring safety and security programs; and participating in on-the-job training programs for new staff.	10

Specifications Degree/ Points

Skill and Knowledge 3 / 166

The work requires a thorough knowledge in mechanical engineering technology including mathematics, physics, statics, dynamics, thermal and flow processes, properties, strength and selection of materials and machine design; a good knowledge of manufacturing methods and procedures and their application to industrial organizations, quality assurance principles and practices, Statistical Sampling and Process Control and of software quality assurance; detailed knowledge of the procedures used in the departmental QA System and the NATO/Military specifications; a good working knowledge of Computer-Aided Design, Computer-Aided Manufacture, Automatic Test Equipment and other mechanical/electronic/optical measuring equipment used by industry to determine conformance; a thorough knowledge of the packaging and preservation requirements; a thorough knowledge of contracts; the departmental R&0 Management System; the departmental Technical Defect Reporting System; and the departmental Design, Drawing and Documentation System.

Skill is required to assess contractor quality programs, to plan and develop departmental quality assurance plans; to identify and resolve technical and quality problems; and to use drawings, measuring and test equipment.

Technical Responsibility B1 / 103

The Detachment Quality Representative's responsibilities which cover QA, Technical, Logistics and Contract Administration are carried out in accordance with guidelines ranging from broad to detailed. Initiative and judgement are necessary to review and assess contractor quality control systems/inspection plans and to schedule verification to coincide with contractor activity. There is a frequent requirement to modify normal quality assurance plans to take advantage of technological or production changes made by the contractors. Technical initiative and judgement are necessary to approve contractor recommended levels of repair on maintenance contracts and to assess and prepare comment on contractor requests to deviate from the drawings and specifications and QA requirements. Initiative and judgement are necessary to raise corrective action requests, to assess acceptability and to release or withhold material and signature on payment invoices. Persistent disregard by a contractor of requests for corrective action is an example of the type of problems referred to a supervisor. Initiative and judgement are necessary to delegate government quality assurance on sub-contracts raised by industry holding prime contracts to ensure acceptable quality without undue expenditure of resources by the Department. A poor or wrong decision could adversely affect delivery of contracted materiel, inhibit departmental operations, result in defective material finding its way into the Department's inventory which could lead to personal injury, loss of life, added cost to the department and loss of goodwill and prestige with industry and foreign governments.

Working Conditions 3 / 54

The work requires inspection at a variety of contractor's plants, manufacturing and overhauling heavy mechanical equipment such as welded steel tanks, earth moving equipment, vehicle components and machined parts. Frequent travel between plants in a metropolitan area is involved. While servicing contractor's, the DQR is exposed continuously to dust, fumes, heat and noise characteristic of the manufacturing

Degree/
Points

processes. By the nature of the jobbing industry, the hazard level and risk of injury from materials handling and temporary work arrangements is high. The job also involves frequent standing, walking, climbing, moving objects and working in confined spaces which creates a high level of fatigue.

Supervision 1 / 15

There is no requirement for supervision; however, the incumbent may be called upon to train new employees.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 19 Level: 2

Descriptive Title: Junior Inspector, Weights and Measures Point Rating: 215

Reports to: Operations Supervisor

Position Profile

This is a district position, working under the supervision of a senior inspector.

Duties	% of Time
Conducts routine inspections and tests of a variety of mechanical and electronic weighing and measuring devices and systems used in commercial transactions where weight, time, liquid or linear measure is the basis for price determination.	85
Performs other duties such as: examining commodities to ensure that the declaration is in accordance with the applicable act; preparing draft investigative reports of inspection findings and recommending corrective or enforcement action to senior inspector; recalibrating departmental and industry standards.	15

Specifications	Degree/ Points
Skill and Knowledge	1 / 50

The work requires a working knowledge of the techniques and practices associated with the weighing and measuring of commodities in commercial transactions; a good knowledge of the particulars of construction, methods of installation and metrological characteristics of a variety of mechanical and electronic devices using weight, linear and liquid measurement; a knowledge of the Weights and Measures Act and Regulations, the Feeds, Seeds, Fertilizers and Pest Control, and the Packaging and Labelling Acts and Regulations, Ministerial directives, inspection procedures, and the Departmental enforcement policy; a good knowledge of mathematics, the lever principle, and its applications, either simple or combined, the load cell, the fundamentals of physics in the field of gravity, the expansion and contraction of solids, and the characteristics of different fluids, such as petroleum products, milk, water and liquid fertilizers.

The work requires the skill to detect fraudulent practices and the unauthorized modification of measuring devices; to proceed to tests and evaluate the condition of a device and the compliance standards of its installation.

Technical Responsibility Al / 50

Judgement and initiative are required in maintaining and calibrating standards, as well as inspecting and verifying, or rejecting a variety of simple, and progressively more complex, weighing and measuring devices. Sound judgement is important in these duties in order to interpret legislation and take enforcement action.

Degree/
Points

Although difficulties and inspection problems can be discussed with a senior inspector, or immediate supervisor, an error in judgement could result in a loss of revenue. Incorrect advice to a manufacturer or retailer may also cause losses to the concerned and the public, as well as affect the Department's credibility. The inadvertent inspection and verification of a device used in trade which is not approved, or is outside tolerances, could represent losses at different levels of trade and embarrassment to, or possible prosecution against the Department.

Working Conditions 5 / 100

The work requires physical effort in handling 50 lb and 20 kg test weights, and 20 litre volumetric prover filled with petroleum product. The work is performed in all kinds of weather, and exposure to disagreeable conditions is frequent: having to crawl under scale structures, climb on tank trucks, frequent exposure to grain dust in feed mills, noxious odors in slaughter houses, paint manufactures, paper mills, petroleum products bulk plants, propane gas plants and refrigerated meat plants; it also requires being away from home frequently.

Supervision 1 / 15

There is no requirement for supervision.