



Treasury Board of Canada
Secrétariat

Secrétariat du Conseil du Trésor
du Canada

CLASSIFICATION STANDARD

GENERAL TECHNICAL

Technical Category

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INTRODUCTION

This standard describes the point-rating plan to be used to evaluate jobs allocated to the General Technical Group. It consists of an introduction, definitions of the Technical Category and the occupational group, point-rating scales and benchmark position descriptions.

Point rating is an analytical, quantitative method of determining the relative value of jobs. It is particularly suited to heterogeneous occupational groups in which jobs consist of varied combinations of tasks. Essentially, point-rating plans define characteristics or factors common to the jobs being evaluated. They 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 judgements can be made. The point-rating method facilitates rational discussion and resolution of differences in determining the relative values of jobs.

Factors

The combined factors do 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 values of jobs.

Five factors are used in this plan. Three of these are two-dimensional and all five are defined in terms of two or more related elements.

Point Values

The maximum point value assigned to each factor reflects its relative importance. Similarly, point values have been assigned to the degrees of the factors.

Point values of the degree of each factor increase arithmetically. The minimum point value assigned to four of the factors is one-fifth of the maximum value, and for the fifth, Supervision, it is one-tenth.

Rating Plan

In the rating plan the factors, elements, weights and point values shown on the Text page are used.

General Technical

| <u>Factor</u> | <u>Element</u> | <u>Percentage of Total Points</u> | <u>Point Values</u> | |
|--------------------------------|--|---------------------------------------|---------------------|----------------|
| | | | <u>Minimum</u> | <u>Maximum</u> |
| Knowledge | Training and Experience | 35 | 70 | 350 |
| Technical Responsibility | Scope for Initiative and Judgement Impact of Action Taken | 30 | 60 | 300 |
| Responsibility For Contacts | Purpose and Nature of Contacts Persons Contacted | 10 | 20 | 100 |
| Conditions of Work | Concentration Physical Effort Environment and Hazards | 15 | 30 | 150 |
| Supervision | Nature of Supervisory Responsibility Number of Employees Supervised | 10 | 10 | 100 |
| | | 100 | | |

Bench-mark Positions

Bench-mark position descriptions are used to exemplify degrees of each factor or element. Each description consists of a brief summary, a list of the principal duties with the percentage of time devoted to each, and a specification describing each of the point-rating factors and elements as it appears in the job. The bench-mark positions have been evaluated, and the degree and point values assigned to 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 application of the rating scales.

Use of the Standard

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

1. Allocation of the position to the category and the group is confirmed by reference to the definitions and the descriptions of inclusions and exclusions.
2. The position description is studied to ensure understanding of the position as a whole and of each factor. The relation of the position being rated to positions above and below it in the organization is also studied.
3. Tentative degrees of each factor in 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 descriptions of factors and the notes to raters.
4. 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.
5. The point values for all factors are added to determine the tentative total point rating.
6. 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 values 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 allocated to the same level.

Minimum Qualifications

Each of the group definitions in the Category includes a statement of "Minimum Qualifications". These requirements are to apply without modification to all new entrants to the labour force, that is, students who have just completed their fulltime studies, and young people commencing full-time employment. With respect to experienced workers who may not possess the formal education prescribed in the definitions, the statements are intended to indicate the norms against which the qualifications of the individual may be assessed, in order to judge whether or not the combination of his education, training and experience provide, for the particular job being filled, qualifications equal to or higher than those prescribed in the "Minimum Qualifications" of the relevant occupational group.

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.

Minimum Qualifications

Completion of secondary school education.

RATING SCALES

GENERAL TECHNICAL GROUP

FACTORS AND WEIGHTS

| | |
|-----------------------------|-------|
| KNOWLEDGE | 350 |
| TECHNICAL RESPONSIBILITY | 300 |
| RESPONSIBILITY FOR CONTACTS | 100 |
| CONDITIONS OF WORK | 150 |
| SUPERVISION | 100 |
| | <hr/> |
| | 1,000 |

KNOWLEDGE

The factor is used to measure the difficulty of the work in terms of the training and experience required to perform the duties of the position.

Definitions

"Training" refers to the level of academic and vocational preparation required to carry out the duties of the position.

"Experience" refers to the relative length of time required, under optimum conditions, to develop the skill and acquire the knowledge needed to carry out the duties of the position.

Notes to Raters

Training and experience are normally acquired by formal or private study, by on-the job training under a qualified worker, and by working in related and progressively more responsible jobs.

The degrees of the Knowledge factor assigned to the bench-mark positions have been established by the comparative ranking of key positions in the General Technical Group. The nine degrees of the factor are not directly related to years of training and experience, but indicate the relative knowledge requirements of positions within the occupational group.

In evaluating the knowledge required to perform the duties of a position raters are to consider such characteristics as the variety and novelty of equipment used, the number of different methods, procedures and approaches in which experience and training are required, and the requirement for awareness of trends and developments in the field in which the incumbent is employed.

The degree tentatively selected is to 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.

RATING SCALE - KNOWLEDGE

| Degree of Training and Experience | Points | Bench-mark Position Descriptions |
|-----------------------------------|--------|--|
| 1 | 70 | Page |
| 2 | 105 | Commodity Specialist 33 |
| 3 | 140 | Aircraft Dispatcher 23 District Conservation Officer 36 Specifications Writer 60 |
| 4 | 175 | Park Safety Officer 50 |
| 5 | 210 | Airp. Fire Prev. and Fighting Standards Technician 27 Aviation Museum Technologist 30 Glass Blower, Scient. Apparatus 44 |
| 6 | 245 | Publications Manager |
| 7 | 280 | Interior Designer 47 Ship Operations Officer 57 |
| 8 | 315 | Exhibit Designer 40 |
| 9 | 350 | |

TECHNICAL RESPONSIBILITY

This factor is used to measure the difficulty and importance of the duties of the position in terms of the scope for initiative and judgement, and the impact of action taken.

Definitions

"Scope for initiative and judgement" refers to the freedom to take particular courses of action within the framework of guide-lines, directives and the inherent restrictions of the art or craft.

"Impact of action taken" refers to the importance of the work performed in terms of the effect on the departmental program or the nature and extent of the resources committed.

"Program" refers to a general plan designed to achieve the objectives determined by a department or agency to meet the aims and intent of policy.

"Project" refers to specific plans of action that are developed and implemented by an organization to achieve the objectives of a segment of a program.

Notes to Raters

In evaluating positions under the Scope for Initiative and Judgement element, the availability of direction or supervision and the degree of authority delegated by superiors are to be considered. Also to be considered is the degree to which the work requires creative expression and innovation, and the exercise of imagination in carrying out projects.

The four degrees of the Impact of Action Taken element are illustrated by the benchmark position descriptions. Characteristics of the work such as the following are to be considered in determining the tentative degree of this element:

1. The effect of action taken on the achievement of program or project objectives, and on the quality and cost of the finished work.
2. The amount of funds, the volume and nature of staff, and other departmental resources affected.
3. The extent to which the incumbent is the effective recommending authority, which is usually related to the level of the position in the organization.

Any one characteristic is only an indication of the impact of action taken, and the whole context within which the work is performed is to be considered.

General Technical

The degrees of the two elements of the Technical Responsibility factor tentatively selected are to be confirmed by comparing the duties of the position being rated with the duties and specifications of the bench-mark positions that exemplify those degrees tentatively selected.

RATING SCALE - TECHNICAL RESPONSIBILITY

| Scope for Initiative and Judgement and Degree | | | | | |
|---|---|--|---|--|---|
| Impact of Action Taken, and Degree | The work is performed according to specific instructions. Some initiative and judgement is required in applying established practices to meet clearly defined requirements. | The work is performed according to instructions. A moderate degree of initiative and judgement is required in applying established practices and selecting precedents to achieve objectives. | The work is performed according to general instruction. A considerable degree of initiative and judgement is required in adapting and applying established practices and selecting precedents used to achieve project objectives. | The work is performed according to general instructions. A significant degree of initiative and judgement is required in developing new approaches and methods used to achieve project objectives. | The work is performed according to directives. A high degree of initiative and judgement is required in planning, implementing and evaluating approaches and methods used to achieve the objectives of a segment of a |
| | A | B | C | D | E |
| 1 | 60/ Page | 96/ Page Aircraft Dispatcher 23 Commodity Specialist 33 | 132 / Page Park Safety Officer 50 | 168 / Page Glass Blower, Scientific Apparatus 44 | 204/ Page |
| 2 | 92/ | 128/ District Conservation Officer 36 Specifications Writer 60 | 164/ Airport Fire Prevention and Fighting Standards Technician 27 Aviation Museum Technologist 30 | 200/ Publications Manager 54 | 236/ |
| 3 | 124/ | 160/ | 196/ Interior Designer 47 | 232/ | 268/ |
| 4 | 156/ | 192/ | 228/ | 264/ Exhibit Designer 40 Ship Operations Officer 57 | 300/ |

RESPONSIBILITY FOR CONTACTS

This factor is used to measure the difficulty and importance of the duties in terms of the purpose and nature of the contacts and the level of persons contacted.

Definition

"Officials" refers to professional, administrative and other personnel with some degree of authority to influence projects or the required support services.

Notes to Raters

Only those contacts that are an integral part of the work and that result from the duties assigned or sanctioned by management are to be considered. Contacts between subordinates and superiors are to be rated at the minimum A₁.

If the duties of the position include contacts having more than one combination of purpose of contact and level of persons contacted, the points for each combination are to be determined and the highest point value assigned.

Points are to be assigned for written contacts only if the duties of the position being rated include responsibility for signing letters or memoranda. Points will not be assigned if responsibility is limited to contacts by form or pattern letters.

RATING SCALE - RESPONSIBILITY FOR CONTACTS

| | | Purpose and Nature of Contacts, and Degree | | |
|---|---|---|--|--|
| Persons Contacted and Degree | | To exchange information relative to the work performed and requiring limited explanation. | To discuss work, methods and procedures requiring elaboration and understanding. | To discuss such matters as interpretation of specifications, objectives, definitions and priorities requiring resolution of conflicting views, with authority to recommend |
| | | A | B | C |
| Such persons as employees in own work group, and of own department other than officials and professional staff. | 1 | 20/ <u>Page</u> | 45/ <u>Page</u> | 70/ <u>Page</u> |
| Such persons as officials and professional staff in own department, employees other than officials and professional staff of other departments and outside agencies, and members of the general public. | 2 | 35/ | 60/ Aircraft Dispatcher 23 Commodity Specialist 33 Glass Blower, Scient.Appar.44 Park Safety Officer 50 Specifications Writer 60 | 85/ Airport Fire Prevention and Fighting Standards Technician 27 Publications Manager 54 |
| Such persons as officials and professional staff of other departments and outside agencies, and representatives of other governments. | 3 | 50/ | 75/ Aviation Museum Techn. 30 District Conservation Off. 36 Interior Des. 47 Ship Opera tions Officer57 | 100/ Exhibit Designer 40 |

CONDITIONS OF WORK

This factor is used to measure the demand of the work in terms of the requirements for concentration and physical effort and for exposure to disagreeable conditions and hazards.

Notes to Raters

The definitions of degrees of the Concentration element refer to "attention" and to "concentration". The term "attention" is used to describe the effort involved in being observant and exercising care in carrying out the duties of the position. The term "concentration" is used to describe the effort involved in focusing total attention on some aspect of the work, often to the exclusion of everything else.

In evaluating positions under the Concentration element raters are to consider the extent to which the worker is able to control the frequency and duration of attention or concentration.

In evaluating positions under the Physical Effort element raters are to consider the kind, frequency, intensity and duration of muscular exertion, the work positions, and the weights of objects handled.

In evaluating positions under the Environment and Hazards element raters are to consider environment in terms of the kinds, severity and frequency of exposure to disagreeable conditions. Raters are to consider those hazards that are probable and not those that are remotely possible. Raters should also bear in mind the hazards presented by material being handled and the equipment and tools used.

Only those conditions that are of value in assessing relative differences between jobs are to be considered. The degree of each element tentatively selected is to be confirmed by comparing the duties of the position being evaluated with the duties and specifications of the bench-mark positions that exemplify that degree.

RATING SCALE - CONDITIONS OF WORK

CONCENTRATION

"Concentration" refers to the kind, frequency, intensity and duration of attention, concentration and mental-sensory co-ordination required by the work.

| Concentration and Degree | Points | Bench-mark Position Descriptions | | | | | | | | | | |
|---|-------------|---|------------------------------------|-------------|---------------------|----|----------------------|----|----------------------|----|-------------------------|----|
| The work requires a moderate level of attention or mental-sensory co-ordination, with infrequent short periods of concentration. | 10 | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="text-align: right; border-bottom: 1px solid black;"><u>Page</u></th> </tr> </thead> <tbody> <tr> <td>Aircraft Dispatcher</td> <td style="text-align: right;">23</td> </tr> <tr> <td>Commodity Specialist</td> <td style="text-align: right;">33</td> </tr> <tr> <td>Publications Manager</td> <td style="text-align: right;">54</td> </tr> <tr> <td>Ship Operations Officer</td> <td style="text-align: right;">57</td> </tr> </tbody> </table> | | <u>Page</u> | Aircraft Dispatcher | 23 | Commodity Specialist | 33 | Publications Manager | 54 | Ship Operations Officer | 57 |
| | <u>Page</u> | | | | | | | | | | | |
| Aircraft Dispatcher | 23 | | | | | | | | | | | |
| Commodity Specialist | 33 | | | | | | | | | | | |
| Publications Manager | 54 | | | | | | | | | | | |
| Ship Operations Officer | 57 | | | | | | | | | | | |
| The work requires a high level of attention or mental-sensory co-ordination, with frequent short periods of concentration. | 23 | <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 80%;">Aviation Museum Technologist</td> <td style="text-align: right;">30</td> </tr> <tr> <td>Interior Designer</td> <td style="text-align: right;">47</td> </tr> </tbody> </table> | Aviation Museum Technologist | 30 | Interior Designer | 47 | | | | | | |
| Aviation Museum Technologist | 30 | | | | | | | | | | | |
| Interior Designer | 47 | | | | | | | | | | | |
| The work requires a high level of attention or mental-sensory co-ordination, with sustained periods of concentration. | 36 | <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 80%;">Exhibit Designer</td> <td style="text-align: right;">40</td> </tr> </tbody> </table> | Exhibit Designer | 40 | | | | | | | | |
| Exhibit Designer | 40 | | | | | | | | | | | |
| The work requires a very high level of attention or precise mental-sensory co-ordination with sustained periods of concentration. | 50 | <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 80%;">Glass Blower, Scientific Apparatus</td> <td style="text-align: right;">44</td> </tr> </tbody> </table> | Glass Blower, Scientific Apparatus | 44 | | | | | | | | |
| Glass Blower, Scientific Apparatus | 44 | | | | | | | | | | | |

MATING SCALE - CONDITIONS OF WORK ENVIRONMENT AND HAZARDS

"Environment" refers to the kind, severity and frequency of exposure to disagreeable conditions encountered during the performance of the work. Examples of disagreeable conditions include

- exposure to dust, dirt, heat, cold, obnoxious odours, noise or vibration,
- the requirement to wear cumbersome protective clothing or equipment, and
- the requirement to be away from home frequently or for significant periods.

"Hazards" refers to the requirements to work under conditions that may result in sickness or injury to the employee, although usual safety measures have been taken.

| Work Environment and Degree | Probable Severity of Injury, and Degree | | |
|---|--|--|--|
| | Minor sickness or injury. A | "Lost-time" sickness or injury. B | Sickness or incapacitating injuries that can result in diminished capacity. C |
| Good working environment, with few disagreeable conditions. 1 | 10/ Aircraft Dispatcher 23 Aviation Museum Technologist 30 Commodity Specialist 33 Publications Manager 54 Ship Operations Officer 57 Specifications Writer 60 | 19/ | 28/ |
| Fair working environment such as significant exposure to one disagreeable condition, OR occasional exposure to either several disagreeable conditions or to one very disagreeable condition. 2 | 17/ Exhibit Designer 40 Interior Designer 47 | 26/ District Conservation Officer 36 | 35/ Park Safety Officer 50 |
| Poor working environment, such as significant exposure to several disagreeable conditions or to one very disagreeable condition. 3 | 24/ | 33/ Glass Blower, Scientific Apparatus 44 | 42/ |
| Very poor working environment, such as significant exposure to several very disagreeable conditions for extended periods. 4 | 31/ | 40/ | 50/ |

SUPERVISION

This factor is used to measure the continuing responsibility that the incumbent of the position assumes for the work and guidance of other employees as indicated by the nature of the supervisory responsibility and the number of employees supervised.

Definitions

"Nature of supervisory responsibility" refers to the extent to which supervisory positions have such responsibilities as controlling the quantity and quality of work, assigning work, allocating staff, evaluating employee performance, and training and disciplining staff, and making recommendations on the number of positions needed to perform the work.

"Number of employees supervised" refers to the total number of employees for whom the incumbent of the position exercises line supervisory responsibility directly or through subordinate supervisors.

Notes to Raters

In all positions there is some requirement for showing others how to perform tasks or duties; therefore, no position will be assigned less than 10 points (A₁).

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

For the purpose of this standard, "number of employees supervised" includes the total of the following:

1. The number of employees in the department or agency for whom the incumbent of the position has continuous responsibility.
2. The number of man-years of work performed by casual, part-time and seasonal employees supervised by the incumbent of the position.

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

The rating scale shows the point values assigned to four degrees of the Nature of Supervisory Responsibility element. These degrees, which are designated only as A, E, C and D on the scale, are defined in the table appearing on the next page.

| Nature of Supervisory Responsibility, and Degree | Bench-mark Position Descriptions | Page |
|--|-------------------------------------|----------------------------------|
| Shows other employees how to perform tasks or duties. | A | Aircraft Dispatcher 23 |
| | | Aviation Museum Technol. 30 |
| | | Commodity Specialist 33 |
| | | Exhibit Designer 40 |
| | | Interior Designer 47 |
| | | Ship Operations Officer 57 |
| | | Specifications Writer 60 |
| Assigns work and checks on completion. Instructs employees in work methods and procedures. Advises employees on the solution of problems. Reports on employee performance. | B | Park Safety Officer 50 |
| | | Publications Manager 54 |
| Organizes and controls the work of employees. Schedules and assigns work and allocates staff to cope with fluctuations in workload or absences. Provides guidance and direction to subordinates. Assesses adequacy of work performance standards and recommends changes. Formally evaluates employee performance. Formally recommends promotions and disciplinary action. Formally recommends changes in numbers and classification of positions. | C | District Conservation Officer 36 |
| Organizes and directs the work through subordinate supervisors. Provides guidance and direction to subordinate supervisors. Reviews recommendations on adequacy of work performance standards and authorizes changes. Reviews employee performance evaluations and formally evaluates performance of subordinate supervisors. Reviews and approves recommendations on promotions and disciplinary action. Reviews, substantiates and approves recommendations on changes in numbers and classification of positions. | D | |

RATING SCALE - SUPERVISION

| Number of Employees Supervised, and Degree | | Nature of Supervisory Responsibility, and Degree | | | |
|--|---|--|----|----|-----|
| | | A | B | C | D |
| Any number of employees | | 10 | | | |
| 1 - 3 | 2 | | 15 | 30 | 45 |
| 4 - 8 | 3 | | 29 | 44 | 59 |
| 9 - 15 | 4 | | 43 | 58 | 73 |
| 16 - 24 | 5 | | 57 | 72 | 87 |
| Over 24 | 6 | | 71 | 86 | 100 |

BENCH-MARK POSITION DESCRIPTION INDEX

In Alphabetical Order

| <u>BENCH-MARK POSITION NO.</u> | <u>DESCRIPTIVE TITLE</u> | <u>PAGE</u> |
|------------------------------------|---|-------------|
| 1 | Aircraft Dispatcher | 23 |
| 2 | Airport Fire Prevention and Fighting Standards Technician | 27 |
| 3 | Aviation Museum Technologist | 30 |
| 4 | Commodity Specialist | 33 |
| 5 | District Conservation Officer | 36 |
| 6 | Exhibit Designer | 40 |
| 7 | Glass Blower, Scientific Apparatus | 44 |
| 8 | Interior Designer | 47 |
| 9 | Park Safety Officer | 50 |
| 10 | Publications Manager | 54 |
| 12 | Ship Operations Officer | 57 |
| 13 | Specifications Writer | 60 |

BENCH-MARK POSITION DESCRIPTION INDEX

In Ascending Order of Point Values

| <u>DESCRIPTIVE TITLE</u> | <u>BENCH-MARK POSITION NO.</u> | <u>TOTAL POINTS</u> | <u>PAGE</u> |
|---|------------------------------------|-------------------------|-------------|
| | | 239 | |
| Commodity Specialist | 4 | 301 | 33 |
| Aircraft Dispatcher | 1 | 336 | 23 |
| Specifications Writer | 13 | 368 | 60 |
| District Conservation Officer | 5 | 461 | 36 |
| Park Safety Officer | 9 | 477 | 50 |
| Airport Fire Prevention and Fighting Standards Technician | 2 | 499 | 27 |
| Aviation Museum Technologist | 3 | 502 | 30 |
| Glass Blower, Scientific Apparatus | 7 | 561 | 44 |
| Publications Manager | 10 | 575 | 54 |
| Interior Designer | 8 | 611 | 47 |
| Ship Operations Officer | 12 | 659 | 57 |
| Exhibit Designer | 6 | 772 | 40 |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 1

Level:

Descriptive Title: AIRCRAFT DISPATCHER

Point Rating: 336

Summary

Under the general supervision of the Chief Dispatcher, Flight Services, Civil Aviation Branch, Department of Transport, participates in the planning of departmental flights originating in Ottawa; provides a pre-flight support to the flight crew; participates in planning travel arrangements for very senior personnel; provides a follow-up service to aircraft absent from their Ottawa base; and performs other duties.

Duties

% of Time

- Participates in the planning of departmental flights originating in Ottawa to ensure that aircraft are provided on schedule and according to requirements
 - by examining flight requests and selecting an aircraft on the basis of passenger and luggage load, route and distance of flight,
 - by combining flight requests whenever practical to ensure the economical use of aircraft,
 - by confirming the availability and serviceability of the aircraft selected for the flight or selecting an alternative aircraft, 30
 - by informing ground crew of aircraft fuel requirements and adjustments thereto necessitated by last-minute changes in route or loading,
 - by arranging for the provision of in-flight catering, essential services and facilities at en route stops and final destination, and ground accommodation,
 - by requesting the Chief Executive Pilot to assign a flight crew, and
 - by bringing to the attention of the Chief Executive Pilot problems caused by crew duty-time limitations.

- Provides pre-flight support to the flight crew
 - by ensuring that special or emergency equipment essential to the flight is in the aircraft or in the possession of the flight crew prior to departure,
 - by selecting flight publications and maps, assembling aircraft documents essential to the flight, and submitting the package to the flight crew,
 - by correlating aircraft fuel load with passenger and freight load and distance to be flown, and computing weight and balance data,
 - by submitting weight and balance data to the flight crew for review and approval, 25

- by drafting a flight plan and submitting it to the flight crew for their approval and forwarding to the Air Traffic Control agency,
 - by assembling weather information applicable to the flight route, en route stops and final destination and presenting it to the flight crew for their examination, and
 - by informing the flight crew of last-minute changes in route, and in fuel, freight and passenger loads, to enable them to amend the flight plan and weight and balance data.
- Participates in planning travel arrangements for very senior personnel on departmental aircraft
- by reviewing proposed itineraries to determine the type of aircraft required,
 - by calculating on the basis of the operating characteristics of the aircraft tentatively selected the point-to-point flying time and the fuelling stops required,
 - by determining the requirements for and availability of ground handling services, ramp and hangar space, crew accommodation, and customs and immigration services at en route stops and final destination,
 - by determining the overflight and diplomatic clearances required for proposed routes and informing the flight crew or arranging clearances on their behalf, 15
 - by determining the requirements for special equipment and charts and other relevant flight publications, and ensuring that they are available to the flight crew when required,
 - by discussing with the Chief Executive Pilot and resolving problems arising from crew duty-time limitations on the proposed flight,
 - by informing aides to ministers and other very senior personnel of progress made in their travel arrangements, and
 - by suggesting changes to itineraries when so indicated by aircraft operating characteristics or lack of ground facilities.
- Provides a follow-up service to aircraft absent from their Ottawa base
- by keeping a log of aircraft movements as indicated by telephone, message or radio,
 - by keeping a listening watch on the allotted VHF and HF channel and passing and receiving messages to and from the aircraft as required, and 15
 - by acting as a liaison between flight crew and base maintenance when unserviceabilities occur and ensuring that spare parts are forwarded by the fastest means possible,
- Performs other duties such as keeping the aircraft scheduling board up to date, informing maintenance personnel of all flight requirements and advising them of optimum times to perform aircraft maintenance, informing passengers of flight delays, and 15

% of Time

informing the flight crew of any changes that affect flight planning

Specifications

Degree Point

Knowledge

The work requires a good knowledge of the national and international regulations applicable to the operation of aircraft and the flight characteristics and performance of aircraft operated by the Department of Transport. It also requires a knowledge of flight routes, airport facilities, customs regulations and other factors affecting a given flight. The work requires skill in computing weight and balance data, in using aircraft operational data to compute point-to-point flying time and the quantity of fuel required for a given flight. It also requires skill in compiling and presenting to the flight crew all information such as weather forecasts and reports, airport conditions and availability of ground services that affect a specific flight. This knowledge is normally acquired by in-job training and experience in related work.

3 140

Technical Responsibility

The work requires initiative and judgement in compiling and computing aircraft flight data, co-ordinating aircraft usage, making arrangements for essential services at en route stops and at the final destination, drafting flight plans for submission to flight crew, determining the overflight, diplomatic and other clearances required, and keeping the aircraft scheduling board up to date. Problems caused by inadequate information on which to develop a flight plan or problems such as requests to follow routes that would necessitate the use of marginal airfields are referred to the supervisor. Flight plans and related work are reviewed by the flight crew. Decisions and recommendations facilitate the provision of flight services and affect the orderly scheduling of aircraft.

B₁

Responsibility for Contacts

The work requires contacts with departmental officials to co-ordinate the provision of essential services and facilities, with officials and ministerial aides in other departments to exchange information on the requirements of a flight, and with operations personnel at military and other airports to arrange ground handling and servicing.

B₂ 60

| | <u>Degree</u> | <u>Points</u> |
|--|----------------|---------------|
| <u>Conditions of Work</u> | | |
| Concentration - The work requires attention when monitoring electronic communications equipment and when compiling flight data for presentation to and use by the crew of an aircraft. | 1 | 10 |
| Physical Effort - The work is normally performed at a desk, and requires operating equipment such as teletype, VHF and HF radio transmitters and receivers, and flight computers. | 1 | 10 |
| Environment and Hazards - The work is normally performed in an office in which is installed communications equipment that gives rise to some noise. Its use and operation are not hazardous. | A ₁ | 10 |
| <u>Supervision</u> | | |
| There is an occasional requirement to explain work procedures to the support staff. | | 10 |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 2

Level:

Descriptive Title: AIRPORT FIRE PREVENTION AND
FIGHTING STANDARDS TECHNICIAN

Point Rating: 499

Summary

Under the direction of the Superintendent, Emergency Services and Requirements, Air Services Branch, Department of Transport, develops standards to provide technical direction and gives guidance on the provision of equipment facilities and staffing for airport emergency services; appraises emergency operational plans, proposals and estimates; checks implementation and currency of standards and regulations; and performs other duties.

Duties

% of Time

- Develops standards setting out general requirements and gives technical guidance on the provision of equipment, facilities and staff for emergency services at a given airport resume
 - by studying International Civil Aviation standards and technical literature and maintaining contact with manufacturers to keep abreast of new equipment and practices.
 - by evaluating fire and accident potential at an airport, using such factors as size, weight and fuel capacity of aircraft, passenger loadings and frequency of arrivals and departures,
 - by assessing the potential hazards of the various occupancies of airport buildings and facilities,
 - by defining space and siting requirements for emergency **services** in terms of present and future requirements and optimum response distances, 50
 - by assessing the implications of changes in airport usage patterns and new commitments in terms of present staff and equipment and future requirements, and
 - by developing proposed standards for emergency services.

- Appraises emergency service operational plans, proposals and estimates
 - by reviewing submissions for justification and adequacy in respect of future requirements and for conformity to standards and regulations, 20
 - by reviewing siting proposals and building plans to ensure that clearance between structures, construction material and existing protection facilities are commensurate with proposed occupancy,
 - by reviewing for technical adequacy fire protection agreements with municipalities, and
 - by proposing changes and modifications to plans, proposals and estimates.

- Checks implementation and currency of standards and regulations
 - by visiting airports and inspecting and evaluating

| | <u>% of Time</u> |
|--|------------------|
| emergency services, facilities and equipment, - by arranging for fire protection engineering surveys to be conducted by the Dominion Fire Commissioner, - by reviewing corrective measures proposed by the Dominion Fire Commissioner, and - by recommending on proposals to amend and bring up to date. standards and regulations. | 20 |
| - Performs other duties such as keeping records on the provision of emergency services at airports across the country, attending training courses and seminars, conducting correspondence and writing reports. | 10 |

Specifications

Degree Point

Knowledge

The work requires a thorough knowledge of the chemistry and physics of fires, their prevention and suppression, and a practical knowledge of the design and operation of airport fire and crash trucks and automatic fire detection and protection systems. The knowledge is obtained by attending training courses and seminars, studying technical literature and journals, in-job training and many years of related experience. Skill is required in all phases of fire fighting and the operation and maintenance of fire and crash equipment peculiar to airports. Skill is also required in relating equipment and facilities to the actual operating requirements of an airport and in developing and presenting recommendations based on technical analyses to change and modify standards for airport emergency services.

5 210

Technical Responsibility

The work requires initiative and judgement in developing departmental standards to provide direction and guidance on the provision of equipment, facilities and staffing for airport emergency services, inspecting airports for adherence to standards and regulations, and determining the nature and extent of emergency services required to bring an airport up to standard. It also requires judgement in reviewing and recommending on requests for supplies and protective clothing and proposals for facilities. Established precedents, codes and international standards are available as guides in developing emergency services standards. Recommendations affect departmental resources and the effectiveness of airport emergency services.

C₂ 164

| | <u>Degree</u> | <u>Points</u> |
|---|----------------|---------------|
| <u>Responsibility for Contact</u> | | |
| The work requires contacts with officials of equipment manufacturers to discuss new equipment and developments in the field of fire detection, prevention and suppression. Contacts are made with employees of other departments to exchange information on and co-ordinate fire prevention practices and emergency services at airports. | C ₂ | 85 |
| <u>Conditions of Work</u> | | |
| Concentration - The work requires normal attention with periods of concentration when reviewing siting proposals and building plans to ensure that clearances are in accordance with standards. | 1 | 10 |
| Physical Effort - The work is generally performed in an office without undue physical exertion. Field trips for inspection purposes or participation in training exercises require short periods of greater physical exertion. | 1 | 10 |
| Environment and Hazards - The working environment is good, with few if any disagreeable conditions. There is a possibility of minor injury when participating in training exercises or attending demonstrations. | A ₁ | 10 |
| <u>Supervision</u> | | |
| There is an occasional requirement to explain work requirements to departmental secretarial and clerical staff. | A ₁ | 10 |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 3

Level:

Descriptive Title: AVIATION MUSEUM TECHNOLOGIST

Point Rating: 502

Summary

Under the direction of the Curator, National Aviation Museum, Secretary of State Department, searches and compiles information for the restoration of aircraft and components, fabrication of aircraft models and production of graphic material used in displays; provides technical guidance and instructions to museum staff and model makers for the restoration of specimens and production of scale models; and performs ,other duties.

Duties

% of Time

- Searches for and compiles technical information to guide the restoration of aircraft and components and the fabrication of aircraft models, and production of articles and other graphic material used in displays in the National Aviation Museum, Secretary of State Department
 - by studying contemporary technical specifications, blue prints, plans, reports and maintenance manuals to determine configuration and construction details and identify materials,
 - by studying and interpreting photographs to confirm and elaborate configuration and construction details and identification of materials, and
 - by corresponding with individuals and companies to seek, exchange, augment and verify aeronautical information.60

- Gives museum staff and model makers guidance and instructions to ensure that specimens are restored and models are produced to authentic configurations
 - by making plans, drawings and sketches based on the study of all available information,
 - by developing colour schemes based on period specifications, recollections of individuals and tone analyses of black-and-white photographs, and
 - by providing additional information and detail when requested by museum staff and model makers.20

- Performs other duties such as attending meetings to discuss possible acquisitions of specimens and the selection of subjects to be modelled, giving lectures, approving display designs, reviewing and recommending retention or disposal of aeronautical records and files in the National Archives, conducting correspondence and acting for the Curator **in** his absence. 20

Specifications

Degree Points

Knowledge

The work requires a thorough knowledge of aviation history in general and Canadian aviation history in particular. It also requires a good knowledge of sources of information such as individuals with a first-hand knowledge of old aircraft both civil and military, other aircraft collections, factory records and photographic film collections. The work requires skill in searching through a wide variety of material to develop restoration and model specifications that are authentic and accurate and that may apply to a single aircraft associated with an individual or incident renowned in aviation history. Skill is also required in abstracting essential data from a variety of information, making drawings to be followed by craftsmen restoring aircraft, components and associated equipment and by model makers. This knowledge is normally acquired by training in aircraft operation and maintenance and in drafting and by experience in related work in the aircraft industry.

5 210

Technical Responsibility

The work requires initiative and judgement in locating information and identifying material to be used in determining the configuration, construction details, and colour schemes of old aircraft undergoing restoration or being built in model form for display. Advice and guidance on reference material are available from the Curator. Initiative and judgement are required in evaluating information and deciding what configuration would be most representative or most interesting from an aviation history viewpoint. Decisions affect use of the resources of the Aviation Museum, the authenticity of the restoration or model, and the preservation of irreplaceable specimens and the educational and historical value of the display.

C₂ 164

Responsibility for Contacts

The work requires contacts with departmental associates to discuss arrangements for displays and photographic requirements, with officials of other departments to obtain or verify information, with officials of industry to obtain information and with private individuals who may have first-hand knowledge of old aircraft or know the location of specimens of interest to the museum.

B₃ 75

Conditions of Work

Concentration - The work requires close attention to the detail of written reference material of varying quality to ensure that all pertinent information needed for a restoration or model is abstracted. Periods of concentration are required

2 23

| | <u>Degree</u> | <u>Points</u> |
|---|----------------|---------------|
| when making plans and writing detailed instructions used to restore specimens to an authentic configuration. | | |
| Physical Effort - The work requires little physical effort. | 1 | 10 |
| Environment and Hazards - There is little risk of injury or illness arising from the work, which is performed in an office environment. | A ₁ | 10 |
| <u>Supervision</u> | | |
| There is a requirement to explain work methods and procedures to museum support staff and craftsmen. | A ₁ | 10 |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 4

Level:

Descriptive Title: COMMODITY SPECIALIST

Point Ratings 301

Summary

Under the general supervision of a Senior Commodity Specialist in the Technical Equipment Group, Materiel Command, compiles and provides technical descriptions of physical features, limitations and applications of anti-friction bearings; resolves bearing problems described in unsatisfactory condition reports; and performs other duties.

Duties

% of Time

- Compiles and provides technical descriptions, including explanations of physical features, limitations and applications of anti-friction bearings, for purposes of cataloguing, disposal and procurement action and equipment maintenance in Materiel Command
 - by studying manuals, drawings, specifications, engineering orders and modification leaflets to extract information concerning bearings,
 - by discussing the item in question with representatives of commercial and service organizations,
 - by comparing data with that for equipment described in the United States Cataloguing Identification System,
 - by completing cataloguing request forms when further clarification or more detailed identification **is** required,
 - by checking modification approval forms to validate bearing part numbers and descriptions and to ensure that information needed to procure and assemble modification kits is complete and correct,
 - by drafting purchase descriptions for bearings, incorporating all pertinent manufacturing data such as material, dimensions, configurations and lubricants,
 - by informing appropriate personnel of changes in part numbers, specifications and descriptive data to enable them to make amendments to maintenance publications, and
 - by giving technical advice to stock control officers on the continuing use of bearings reported repairable or surplus.

- Resolves problems on bearing failures described in unsatisfactory condition and equipment failure reports
 - by determining causes of bearing failure from laboratory test reports on material identification, hardness, lubricants used, and other physical characteristics,
 - by consulting with the manufacturer's technical representative to obtain information on past performance of similar bearings,
 - by reviewing maintenance and equipment failure reports and technical publications to ensure that failure is not caused by improper installation, usage or substitution,

55

25

% o f Time

- by drafting recommendations for corrective action to be taken by the originating unit and, if necessary, by user units, and
 - by referring unresolved or difficult problems to the supervisor.
- Performs related duties such as attending meetings to review and discuss bearing specifications, lubricants, packaging, and inspection and quality control; visiting supply depots occasionally to visually inspect bearings held in stock; and reviewing procurement documents to ensure adherence to specifications. 20

Specifications

Degree Points

Knowledge

The work requires a good knowledge of all types of anti-friction bearings, their design, construction and application, and associated lubricants. It also requires a knowledge of the storage, handling and preservation techniques applicable to bearings. The work requires skill in writing draft technical reports and correspondence and extracting information concerning bearings from technical publications, drawings and blueprints. This knowledge is normally acquired by on-the-job training and a number of years' experience compiling technical data, screening maintenance publications, and drafting reports and correspondence. 2 105

Technical Responsibility

The work requires compiling technical data from journals, catalogues, maintenance manuals and other publications and giving advice and guidance to other personnel on the identification, application, lubrication, interchangeability, storage, disposal and procurement of all types of anti-friction bearings. Problems arising from inadequate information or recommendations that could give rise to substantial expenditures or affect flight safety are discussed with the supervisor. Advice is available from engineering personnel within the service organization and from manufacturers. The decisions and recommendations affect procurement and disposal of stocks and the dependability of equipment in which the bearings are installed. 1.11 96

Responsibility for Contacts

The work requires contacts with officers and technical and administrative employees of the department and with manufacturers' representatives to clarify and elaborate on information and specifications, and bearing applications. B2 60

| | <u>Degree</u> | <u>Points</u> |
|---|----------------|---------------|
| <u>Conditions of Work</u> | | |
| Concentration - The work requires attention when compiling and reviewing information to ensure correctness of data for identification and correctness of application, and handling, maintenance and storage instructions. Short periods of concentration are required when examining drawings and other documents to extract information and check accuracy and completeness. | 1 | 10 |
| Physical Effort - The work is performed in an office and requires little physical effort. | 1 | 10 |
| Environment and Hazards - The work is performed in an office environment with little risk of injury or illness. | A1 | 10 |
| <u>Supervision</u> | | |
| The work requires occasionally showing other employees how to perform tasks and keep records. | A ₁ | 10 |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 5

Level:

Descriptive Title: DISTRICT CONSERVATION OFFICER

Point Rating: 461

Summary

Under the direction of the Chief, Conservation and Protection Branch, Pacific Region, Department of Fisheries, organizes and controls the conservation program within the Queen Charlotte Islands District to ensure the orderly harvest and propagation of fishery resources and the protection of spawning beds and other waters; administers the activities of the district to ensure the effective use and care of physical resources; supervises the activities of three fishery officers, 16 seasonal patrolmen and 11 patrol vessel crew members; and performs other duties.

Duties

% of Time

- Organizes and controls the conservation program of the Conservation and Protection Service of the Department of Fisheries within the Queen Charlotte Islands District to ensure the orderly harvest and propagation of fishery resources through the regulation of fishing time, area, gear and seasons and through the protection of 190 spawning beds and other waters in an area comprising 5,200 square miles with 1,000 miles of coastline, with an annual harvest having a processed value of \$8 million, a sports fishing industry worth approximately \$1 million, and 1,500 Indians taking food fish worth \$25,000
 - by arranging and making field inspections in person or through subordinates to ensure the application and currency of conservation and protection controls,
 - by reviewing field reports to forecast fish size and population and to develop conservation and protection guide-lines for the forthcoming season,
 - by developing and maintaining effective communication with field managers of processing, mining, logging and other industries, and with fishermen, Indian organizations, sport associations and resort owners to obtain their understanding and co-operation,
 - by requesting or recommending surveys and construction projects that are beyond the scope or financial authority of the district, and
 - by developing and submitting recommendations for the application of or changes in conservation practices and protection controls.
- 40
- Administers the activities of the district to ensure effective use and care of physical resources valued at approximately \$330,000
 - by controlling the expenditure of funds in excess of \$70,000 a year used for wages for seasonal and casual employees, charter of boats and aircraft, communications,

% of Time

- repair and upkeep of buildings and works, and the acquisition and maintenance of equipment, 25
 - by planning and directing the collection and transmission to regional headquarters of license fees and other monies totalling an average of \$2,000 a year,
 - by allocating, co-ordinating and directing the use of three departmental and nine charter patrol boats, several small boats, three vehicles and charter aircraft,
 - by developing new and revised administrative procedures for the district and submitting recommendations for changes to regional procedures, and
 - by compiling information and developing and submitting staff requirements and financial budgets for inclusion in the annual estimates.

- Supervises the activities of three fishery officers, 16 seasonal patrolmen and 11 patrol vessel crew members engaged in applying and enforcing controls and legislation concerning the conservation and protection of fishery resources
 - by instructing subordinates in work methods and procedures and explaining and interpreting departmental directives,
 - by scheduling and allocating work assignments and checking work in progress,
 - by resolving problems encountered by subordinates in the performance of their duties,
 - by giving advice and assistance in the apprehension and prosecution of violators,
 - by approving the hiring and separation of seasonal and casual employees, 25
 - by appraising staff performance, and by taking and recommending disciplinary or other corrective action as required,
 - by authorizing overtime, scheduling leave and overtime liquidation and recommending payment for unliquidated overtime credits, and
 - by sitting on selection and promotion boards and organizing and directing training programs.

- Performs other duties such as organizing and participating in a district public relations program, compiling statistics, data and information relevant to the conservation program in the district, making reports and conducting correspondence. 10

Specifications

Degree Points

Knowledge

The work requires a knowledge of the fish species found within the district, their habits, forces that upset or change their environment, and the legislation, rules and regulations governing

Degree Points

their protection and conservation. The work requires skill in identifying conditions that affect fish spawning grounds and waters and developing and recommending remedial action. The work also requires skill in persuading people living within the district to accept restrictions and controls designed to protect food and game fish, and in directing those subordinates carrying out the protection and conservation program. This knowledge is normally acquired by on-the-job training, participation in departmental training courses, and several years of related experience.

3 140

Technical Responsibility

The work requires initiative and judgement in identifying those situations and conditions that may affect the propagation of the fish found within the district and in developing and recommending corrective action. The work is performed within established practices and in accordance with directives. Initiative and judgement is also required in determining conditions and circumstances under which departures from these practices are warranted or which are indicative of the need for changes in protective controls. Decisions and recommendations affect commercial and sport fishing and the continuing propagation of the fish found within the district.

B2 128

Responsibility for Contacts

The work requires contacts with service clubs, Indian organizations, sport associations and resort owners to explain departmental practices and regulations governing sport and commercial fishing. Contacts are also required with local managers and representatives of processing plants and fishermen's organizations to explain conservation actions and resolve problems, and with field managers of logging and mining companies to discuss environment conservation and develop acceptable controls to minimize the effects of waste disposal or water diversions.

B
3 75

Conditions of Work

Concentration - The work requires reviewing field reports to identify problem areas and develop changes in procedures and recommendations for changes in legislation. The work also requires concentration when examining spawning beds and other waters to identify the cause and origin of disturbances to the fish population.

1 10

Physical Effort - The work is performed in an office, with occasional field trips requiring travelling in small boats or on foot.

1 10

| | <u>Degree</u> | <u>Points</u> |
|--|---------------|---------------|
| Environment and Hazards - There is exposure to biting insects, inclement weather and the discomfort of travelling in small boats in rough water. There is also a possibility of suffering sprains and fractures when climbing over obstacles and walking over rough terrain. | B2 | 26 |

Supervision

| | | |
|---|----|----|
| The work requires supervising the activities of one clerk, three fishery officers, 11 patrol vessel crew members and 16 seasonal patrolmen working the equivalent of five man-years, providing technical and administrative guidance and direction, forwarding recommendations on work to regional headquarters, reviewing field reports, resolving problems, and approving the hiring and separation of seasonal and casual employees. | C5 | 72 |
|---|----|----|

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 6

Level:

Descriptive Title: EXHIBIT DESIGNER

Point Rating: 772

Summary

Under the general direction of a Project Designer in the Exhibition Commission of the Department of Trade and Commerce, designs within a predetermined budget and a pre-selected theme three-dimensional presentations to promote Canadian products and support informational displays at trade fairs and other gatherings at home and abroad; provides direction and guidance for the fabrication and installation of exhibits; designs layout for graphic and textual copy; and performs other duties.

Duties

% of Time

- Designs three-dimensional presentations and visual displays for the Exhibition Commission of the Department of Trade and Commerce and within a predetermined budget and a preselected theme, to promote sale of Canadian manufactured products and to support cultural and informational displays at trade fairs and other gatherings in Canada and abroad
 - by reading fair rules and regulations and examining floor plans, noting such factors as expected traffic direction, location of electrical outlets and other utilities and the access required,
 - by reviewing reports on the proposed site and on the suitability of previous exhibits,
 - by reviewing products selected for display by participating manufacturers, noting size, colour, function and other details that determine the visual and operational requirements of the exhibit,
 - by selecting manufactured products and other articles to support the theme proposed for cultural and informational displays,
 - by considering the effects of the proximity of one product to another to avoid clashes in presentation and achieve an integrated and harmonious exhibit,
 - by estimating the area required for physical activity and movement in relation to the exhibit and developing a display sequence and progression compatible with the products and volume and flow of traffic,
 - by selecting structural and decorative material and selecting and determining the location of furnishings, lighting equipment and other devices to support or further emphasize the exhibit,
 - by constructing three-dimensional models to scaled measurements for approval by the Exhibit Design Working Committee,
 - by drawing a two-dimensional perspective to further explain the design to the Exhibit Design Working Committee, using art media such as water colour, pastels and pencils, and

50

% of Time

- by consulting in person and by telephone and correspondence with exhibitors to obtain further information and to resolve problems encountered during the design stage of the exhibits.
- Provides direction and guidance for the fabrication and installation of the exhibit at fairs or other gatherings in Canada or abroad
 - by making or having draftsmen make detailed drawings and specifying such features as material, sizes, colour and finish and taking into consideration foreign supplies and availability, 15
 - by converting imperial measurements to metric when required,
 - by completing a component sheet indicating those items to be made, those to be purchased and the source,
 - by writing purchase descriptions to assist Canadian and foreign contractors in submitting tenders, and
 - by making cost estimates to ensure that the exhibit is kept within the predetermined budget.
- Designs layout for graphic and textual copy that is compatible with and supports the theme of the exhibit
 - by selecting type faces, sizes, line lengths and colour of ink to ensure legibility and pleasing appearance,
 - by selecting the position of multilingual material to achieve a balanced page layout in accordance with good typographical practices,
 - by selecting photographs from various sources to further emphasize and explain the purpose of the exhibit, 20
 - by scaling and cropping photographs and indicating the desired treatment such as line, continuous tone and screening,
 - by reviewing copy and layout for exhibitors, considering the exhibit theme and possible copyright infringement, and by suggesting changes, and
 - by supplying layouts and selecting sizes and colours and determining presentation of company logos, departmental names, provincial crests and national flag and coat-of-arms.
- Performs other duties such as attending meetings to discuss design concept, ancillary activities, public relations and publicity, discussing and elaborating construction details with tradesmen in Exhibition commission shops, and visiting exhibition sites in Canada and abroad to provide guidance on the implementation of the design and the installation of the exhibit. 15

Specifications

Knowledge

The work requires a thorough knowledge of public relations, product merchandising and the use of materials and special effects in

| | <u>Degree</u> | <u>Point</u> |
|---|---------------|--------------|
| exhibit presentation, including such items as lighting, colour, graphic and typographical copy, audio-visual aids, kinetic and optical devices, and furnishings. Skill is required in designing the physical layout of exhibits to interpret and convey a designated theme and in making detailed drawings, specifications, instructions and scale models for the implementation and installation of exhibits at fairs or other gatherings in Canada and abroad. Skill is also required in designing layout for graphic and textual copy. This knowledge is normally acquired by completing a course in interior design and decoration at an institute of technology, training in architectural drafting, construction techniques and graphic design, and many years of experience in related work. | 8 | 315 |

Technical Responsibility

| | | |
|---|--------|-----|
| The work requires initiative and judgement in determining the aims, objectives and themes of the exhibit, designing and implementing the physical layout of exhibits at trade fairs and other gatherings in Canada and abroad, giving advice and guidance to manufacturers, investigating and evaluating sources of supply and labour abroad and reporting on new approaches in exhibit design. The work also requires initiative and considerable judgement in creating designs and in adapting and applying exhibit design practices to achieve a presentation that effectively conveys the exhibit theme, promotes Canada or Canadian products, and is within the predetermined budget. The guide-lines for the design of the exhibit are based on the theme expressly selected by other departments and agencies and on the nature of the products to be displayed. Decisions affect the cost and effectiveness of an exhibit and play a large part in the successful projection of a Canadian image, in the creation of a demand for Canadian goods, and in the success of Canadian industry in selling its products in foreign markets. | D 4 | 264 |
|---|--------|-----|

Responsibility for Contacts

| | | |
|---|----|-----|
| The work requires contacts with officials of own and other departments and of industries to discuss the exhibit's purpose and theme and to negotiate presentations that are acceptable and within the predetermined budget. | C3 | 100 |
|---|----|-----|

Conditions of Work

| | | |
|--|---|----|
| Concentration - The work requires considerable attention in the perception, selection and arrangement of a variety of elements that collectively constitute the production of an effective exhibit or display setting. The work also requires making painstaking three-dimensional models, | 3 | 36 |
|--|---|----|

| | <u>Degree</u> | <u>Points</u> |
|---|----------------|---------------|
| two-dimensional perspective coloured renderings, and completely detailed specifications and construction plans. | | |
| Physical Effort - The work requires using drafting, drawing and writing equipment coupled with long periods of standing and walking about at the site of the exhibit when it is actually under construction. | 2 | 30 |
| Environment and Hazards - The work requires spending periods of time at exhibit sites in Canada and abroad to oversee the actual construction of the display. It also requires exposure to the noise, dust and extremes of weather encountered at construction sites. | A ₂ | 17 |
| <u>Supervision</u> | | |
| The work requires explaining details, methods and procedures to draftsmen and tradesmen who are under the supervision of others. | A | 10 |

1

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 7

Level:

Descriptive Title: GLASS BLOWER,
SCIENTIFIC APPARATUS

Point Rating: 561

Summary

Under the general direction of the Chief of Technical Services, fabricates glass apparatus and equipment for scientific research and analytical purposes; modifies, adapts and repairs glass apparatus and equipment situated in various laboratories; seeks ways and means to improve glass working techniques and devises novel approaches to problems; and performs other duties.

Duties

% of Time

- Fabricates extraction chambers, reaction vessels, gas balloons, viscometers, sampling tubes, combustion chambers, manometers, absorbers, distilling columns, and other apparatus and equipment in various types of glass such as soda, quartz and Pyrex for research and analytical purposes and using tools such as oxy-hydrogen torches, lathes, cut-off and lapping machines, drills, annealing oven and polariscopes
 - by discussing requirements with scientists to determine the purpose of the apparatus to be constructed and the special features such as high-vacuum, high temperature, thermal shock, chemical reactions, degree of tolerance, and the nature of the liquids and gases for which provision is to be made,
 - by making plans and sketches that will permit rapid and economical production of a safe appliance,
 - by identifying and matching glass in commercial items and modifying and adapting them for incorporation in the newly designed apparatus,
 - by selecting materials and safe working techniques and constructing a prototype apparatus for testing,
 - by consulting with and obtaining the assistance of other technologists where the apparatus requires electronic, electrical or metal inclusions,
 - by adjusting, modifying and calibrating apparatus as indicated by initial testing, and in conjunction with the scientist, and
 - by making detailed construction specifications and plans for purposes of reproduction or publication in scientific papers and journals.

- Modifies, adapts and repairs glass apparatus and equipment situated in various laboratories
 - by determining the purpose for which the modification or adaptation is required and deciding on the most effective approach to achieve the desired results,
 - by determining the nature and extent of the repairs needed,

65

| | <u>% of Time</u> |
|---|------------------|
| <ul style="list-style-type: none"> - by identifying and matching the various types of glass in the apparatus and equipment, - by incorporating the requisite changes or making repairs, using various glass-working techniques, and - by testing the apparatus and equipment, making adjustments and recalibrating as necessary. | 15 |
| <ul style="list-style-type: none"> - Seeks ways and means to improve glass-working techniques and devises novel approaches to problems <ul style="list-style-type: none"> - by reviewing pertinent literature for previously designed apparatus and for newly developed techniques that may facilitate construction, - by keeping technical data files on glass-working techniques, equipment and other related material, and - by investigating, applying and evaluating new principles, practices, techniques and materials. | 10 |
| <ul style="list-style-type: none"> - Performs other duties such as giving advice and guidance on the fabrication of scientific glass apparatus to other organizations; maintaining glass supplies; maintaining, cleaning and making repairs to equipment; planning work schedules; and requisitioning equipment and supplies. | 10 |

Specifications

Degree Points

Knowledge

The work requires a thorough knowledge of the characteristics, applications and limitations of a wide variety of glass and the materials and equipment used in working it. The work also requires a knowledge of the research activities of the department to facilitate understanding of the apparatus and equipment requirements of the research scientists. Skill is required in all phases of glass working, in designing glass apparatus and equipment to achieve the objectives indicated by the scientist and in making detailed construction specifications and plans. Skill is also required in modifying, adapting and repairing commercial or in-use apparatus and equipment. This knowledge is normally acquired by training in scientific glass working and many years of related experience.

210

Technical Responsibility

The work requires initiative and judgement in designing and constructing glass apparatus and equipment to meet the requirements of scientists and in advising scientists on the design of apparatus and equipment most likely to achieve their objectives.

The work also requires initiative and judgement in determining when commercially available items may be modified at a cost that is less than that for new construction. Guide-lines for the design and

| | <u>Degree</u> | <u>Points</u> |
|---|----------------|---------------|
| construction of the apparatus and equipment are in the form of general verbal instructions and simple sketches indicating the immediate objectives of the scientist concerned. The timely production of safe, effective and accurately calibrated glass apparatus is essential to the orderly progress of research and analytical work. Decisions also affect the cost of fabricating and maintaining glass laboratory equipment with a commercial value of up to \$20,000. | D ₁ | 168 |
| <u>Responsibility for Contacts</u> | | |
| The work requires contacts with research scientists to determine the purpose of the requested apparatus and equipment and to suggest an approach that is technically feasible and will achieve the desired objective. | B ₂ | 60 |
| <u>Conditions of Work</u> | | |
| Concentration - The work requires considerable care in planning the selection and arrangement of glass components and extrusions of varying characteristics that collectively make an effective and safe research and analytical device. The work also requires sustained periods of concentration when working to close tolerances with a fragile substance liable to sudden changes in working state caused by temperature fluctuations that are indicated by variations in colour. | 4 | 50 |
| Physical Effort - The work requires manipulating large, complex and fragile glass articles for long periods in a standing position. | 2 | 30 |
| Environment and Hazards - The work requires manipulating different types of glass at working temperatures varying from 1200°C to 2000°C with the possibility of serious burns. There are greater than normal volumes of carbon dioxide and carbon monoxide plus silicon dioxide fumes present in the air. Protective glasses are worn and there is a possibility that items submitted for repair contain explosive or toxic compounds. | B ₃ | 33 |
| <u>Supervision</u> | | |
| The work requires explaining details, methods and procedures to departmental support staff who are under the supervision of others. | A ₁ | 10 |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 8

Level:

Descriptive Title: INTERIOR DESIGNER

Point Rating: 611

Summary

Under the general direction of the Head, Furnishings Abroad Section, Department of External Affairs, designs and implements furniture and furnishing schemes for chancelleries, official residences and staff quarters abroad; determines requirements for the design and implementation of furniture and furnishing schemes and maintenance of accommodation; participates in the planning and design of new buildings and renovation of existing buildings: and performs other duties.

Duties

% of Time

- Designs and implements, within a predetermined budget and in accordance with local climate, customs, architectural styles and requirements, furniture and furnishing schemes for chancelleries, official residences and staff quarters operated abroad by the Department of External Affairs
 - by determining expenditure patterns according to the importance of the mission and the type of accommodation owned or leased by the department,
 - by controlling quality, design and craftsmanship to maintain costs consistent with the budget,
 - by making detailed floor plans and furniture layouts,
 - by specifying interior finishes and materials for floors, walls and ceilings,
 - by selecting furniture, fabrics, carpets, lamps and accessories and co-ordinating colour, texture and style,
 - by making detailed working drawings of custom furniture and furnishings,
 - by conducting technical correspondence with suppliers and posts abroad to give and obtain information on special designs, custom work, prices and delivery, and
 - by raising purchase orders for all furniture, furnishings and work and recommending their approval.

- Determines requirements for the design and implementation of furniture and furnishing schemes and the interior maintenance of accommodation
 - by visiting posts abroad to gather information,
 - by inspecting and making detailed records on the condition of accommodation,
 - by taking measurements necessary for detailed floor plans and furniture layouts,
 - by meeting with Foreign Service officials and staff to discuss design proposals, explain departmental regulations and directives, and obtain information on local conditions.

75

15

% of Time

- by investigating and evaluating local sources of supply and labour and by obtaining price lists, catalogues, brochures and samples from local manufacturers,
 - by advising Foreign Service personnel on the maintenance of furniture and furnishings, and
 - by submitting to departmental authorities at Ottawa recommendations on the interior decoration or redecoration and the correction of deficiencies of posts abroad.
- Participates, in conjunction with the staff of the Properties and Electrical Sections of the department, in the planning and design of new buildings and the renovation of existing buildings
- by giving advice on material and finishes for floors, walls and ceilings, 5
 - by advising on and devising lighting and painting schemes, taking into account orientation and function of specific areas, and
 - by indicating on plans the location of electrical, telephone and air-conditioning outlets as dictated by proposed furniture layout and window treatment.
- Performs other duties such as visiting furniture and furnishing displays and manufacturers' showrooms and factories, reporting on new developments and supply sources, reviewing trade publications, and writing reports on interior decorating projects. 5

Specifications

Degree Points

Knowledge

The work requires a thorough knowledge of colour theory and harmony, lighting, furniture design and construction, fabrics, materials and finishes. A good knowledge is also required of architectural drafting, furniture design and interior maintenance methods. Skill is required in designing furniture and furnishing schemes, designing custom furniture and making working drawings, solving maintenance problems, interpreting departmental directives, regulations, standards and criteria, and writing reports. Skill is also required in developing and maintaining effective working relations with Foreign Service and other colleagues in the department. This knowledge is normally acquired by completing a course in interior design and decoration at an institute of technology and working as an interior designer and decorator for a number of years.

7 280

Technical Responsibility

The work requires designing and implementing furniture and furnishing schemes for chancelleries and official residences abroad, inspecting accommodation for adequacy and condition of furniture and furnishings, and giving advice and guidance

| | <u>Degree</u> | <u>Points</u> |
|---|---------------|---------------|
| on the interior design requirements of new buildings and the renovation of existing ones. The work also requires investigating and evaluating sources of supply and labour abroad and reporting on new products and approaches. General guide-lines for projects are developed in line with design recommendations and in consultation with Foreign Service officials and the Head of the Section and by adapting and applying accepted and good design and decoration practices. Considerable creativity and ingenuity are required when designing furniture and furnishing schemes to achieve effects compatible with local climate, customs, architectural styles, existing furniture and purchased or leased accommodation. Decisions affect the comfort of personnel serving abroad, the projected image of Canada, and the resources of the department. | C3 | 196 |

Responsibility for Contacts

| | | |
|---|----|----|
| The work requires contacts with foreign service officers to determine the furniture and furnishing requirements of chancelleries, residences and staff quarters and with architects, engineers and designers abroad to arrange for building renovation, supply of material and installation of furniture and furnishings. | B3 | 75 |
|---|----|----|

Conditions of Work

| | | |
|---|----|----|
| Concentration - The work requires a high level of attention to the factors and conditions that influence the final design and choice of furniture and furnishings. Concentration is required when making detailed working drawings of custom furniture and furnishings to ensure compatibility with local resources or when working solely from plans and photographs to design a complete furniture and furnishing scheme. | 2 | 23 |
| Physical Effort - The work is performed at desk and drawing board, with a periodic requirement for field trips. | 1 | 10 |
| Environment and Hazards - The work requires spending periods of time abroad to determine requirements, select material and oversee the actual installation of the furniture and furnishings. It also requires exposure to the extremes of temperature and humidity found in tropical countries. | A2 | 17 |

Supervision

| | | |
|--|----|----|
| There is an occasional need to explain work requirements to departmental secretarial and clerical staff. | A1 | 10 |
|--|----|----|

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 9

Level:

Descriptive Title: PARK SAFETY OFFICER

Point Rating: 477

Summary

Under the general direction of the officer-in-charge of warden services at Banff National Park, instructs park wardens, members of ski patrols and others in the theory, principles and techniques of search and rescue in mountainous terrain; co-ordinates search and rescue operations; conducts a program of avalanche control and public safety; surveys various areas to determine potential for development as a ski resort; and performs other duties.

Duties

% of Time

- Instructs park wardens, members of ski patrols and others in the theory, principles and techniques of winter and summer search and rescue in the mountainous terrain of Banff National Park
 - by developing a training program that includes both the theoretical and practical aspects of search and rescue,
 - by selecting a training site that will provide maximum scope and realistic conditions for the trainees,
 - by briefing the trainees on the nature of the training exercises, explaining the mental and physical demands, and relating theory to practice,
 - by overseeing the exercises to ensure that trainees understand and practise correct techniques and do not become casualties themselves, 40
 - by briefing classes and individuals on the potential hazards of a given area with reference to topographic and atmospheric conditions that can cause or contribute to hazards,
 - by explaining and demonstrating the specialized techniques required in a given area, and
 - by preparing practical and written examinations and grading trainees on theory and on field performance with reference to reaction under stress.

- Co-ordinates winter and summer search and rescue operations in the mountainous terrain of Banff National Park
 - by maintaining a roster of trained personnel capable of carrying out search and rescue operations under hazardous conditions,
 - by selecting, field testing and maintaining an inventory of specialized rescue gear,
 - by developing flexible plans for anticipated rescue operations to meet varying conditions and situations, 30
 - by providing information on best approaches to hazardous areas with reference to prevailing ground and atmospheric conditions,

% of Time

- by developing and maintaining effective communication with the Canadian Armed Forces and the Royal Canadian Mounted Police, and
- by advising and guiding the ski patrols in the area on such matters as number of personnel, amount of equipment, operating techniques and general organization and performance.
- Conducts a program of avalanche control and public safety for the Banff National Park
 - by observing and keeping records of snow fall, temperature and wind action in known slide areas and forecasting the place and time at which the possibility of an avalanche is greatest,
 - by reducing the possibility of an avalanche through the removal of dangerous snow accumulations, using explosives and other means, 15
 - by delivering talks on mountain lore, safety measures, and equipment needed for climbing,
 - by selecting safe climbing routes and recommending location of warning and directional signs,
 - by making recommendations on the type and location of alpine shelters, and
 - by ensuring that climbing parties are registered and recommending changes to ensure their safety.
- Surveys national parks to determine the potential of various areas for ski development and to determine the nature and extent of future expansion of existing developments
 - by evaluating such factors as prevailing weather, the number and slope of possible runs, locations for facilities such as lodges, lifts and parking areas, and the extent of disturbance to surrounding landscape, 10.
 - by examining and assessing the impact on the area of the proposals and recommendations made by consultants and operators, and
 - by writing detailed reports with firm recommendations on proposed and existing ski developments.
- Performs other duties such as. preparing and conducting qualifying tests for alpine guide licences; drafting commentary for television and radio programs promoting mountain safety; and conducting correspondence on search and rescue, mountain safety, ski patrols and other related subjects. 5

Specifications

Degree Points

Knowledge

The work requires a thorough knowledge of the theory, principles and techniques of winter and summer search and rescue operations in mountainous terrain and a good knowledge of climatic conditions which can cause or contribute to hazards. The work also requires a knowledge

| | <u>Degree</u> | <u>Points</u> |
|---|---------------|---------------|
| <p>of first-aid in general and the specialized techniques used to move casualties with serious injuries. The work requires skill in giving instruction in search and rescue, co-ordinating the activities of search parties and maintaining and using a wide variety of rescue gear. The work also requires skill in identifying climatic conditions that can increase the possibility of avalanches and rock slides and in taking remedial action. The work further requires considerable skill in all aspects of skiing and mountaineering and in persuading the public at large to accept restrictions intended for their own protection. This knowledge is normally acquired by on-the-job training and many years of related experience.</p> | 4 | 175 |

Technical Responsibility

| | | |
|---|----------------|-----|
| <p>The work requires initiative and judgement in identifying those situations and conditions that may present hazards to visitors and users of the national park recreation areas and in developing and implementing guide-lines and restrictions that will remove or alleviate these hazards. The work is performed according to the general instructions of the park officer. The work also requires initiative and considerable judgement in modifying and adapting mountaineering practices to meet conditions peculiar to specific areas or conditions brought about by unusual weather. Judgement is also required in developing recommendations for the extension of existing or development of new ski resort areas. Decisions and recommendations affect the safety of the general public, the success of the commercial enterprises operating within the area, and the department's inventory of rescue gear and equipment.</p> | C ₁ | 132 |
|---|----------------|-----|

Responsibility for Contacts

| | | |
|--|----|----|
| <p>The work requires contacts with members of the Armed Forces, Royal Canadian Mounted Police, resort staffs, alpine and mountaineering clubs and the general public to deliver talks on safe climbing and skiing practices, discuss search and rescue techniques, and obtain detailed information on new rescue gear and equipment.</p> | B2 | 60 |
|--|----|----|

Conditions of Work

| | | |
|--|---|----|
| <p>Concentration - The work requires surveying national parks to determine and recommend on the potential of a site for development or expansion as a ski resort. The work also requires concentration when developing training courses and preparing and conducting examinations.</p> | 1 | 10 |
|--|---|----|

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|--|---|----|
| <p>Physical Effort - The work is generally performed outdoors and requires considerable walking, climbing and skiing. Greater physical effort is required when demonstrating</p> | 3 | 50 |
|--|---|----|

| | <u>Degree</u> | <u>Points</u> |
|--|----------------|---------------|
| mountaineering techniques and the removal of casualties from places that are reached only with difficulty. | | |
| Environment and Hazards - There is exposure to extremes of weather and the risk of serious fractures that may result in a permanent disability. | C ₂ | 35 |
| Supervision | | |
| The work requires supervising two park wardens, instructing them in work methods, assigning and reviewing work, resolving problems and reporting on performance. | B ₂ | 15 |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 10

Levels

Descriptive Title: PUBLICATIONS MANAGER

Point Rating: 575

Summary

Under the direction of the Head, Planning and Programming, Information Service Branch, Department of Manpower and Immigration, schedules and co-ordinates the physical reproduction of all promotional material; drafts detailed production specifications; gives technical advice and guidance to editors and writers on reproduction matters; provides advice on estimates and cost control for publications; and performs other duties.

Duties

% of Time

- Schedules and co-ordinates the physical reproduction of all promotional material required by the Information Service Branch and other branches of the Department of Manpower and Immigration
 - by determining the nature and quantity of promotional material required and the dates required for distribution,
 - by suggesting deadlines for the completion of each stage of the material to attain the final assembly of printer's copy by a date that is realistic in terms of printing time required,
 - by negotiating the purchase of design and art work from commercial firms and the Queen's Printer, 40
 - by discussing the work with the Planning Branch of the Queen's Printer to resolve any technical problems,
 - by raising requisitions on the Queen's Printer for the printing of material,
 - by negotiating, in conjunction with the Purchasing *Branch* of the Queen's Printer, tenders for printing and graphic art,
 - by answering queries and supplying further information when the Queen's Printer or commercial firms encounter problems in the production of promotional material or publications, and
 - by examining work at various stages of completion to ensure adherence to specifications and to the schedule.

- Drafts detailed production specifications for lithographic, letter press and silk screen printers and for typographers, artists, engravers and photographers in accordance with the regulations governing the procurement of printing and related services
 - by determining the requirements of the originator in terms of material, colour, layout, typefaces, binding and format generally, 20
 - by determining whether requirements can be met with services that are available and by suggesting alternatives when necessary, and

% of Time

- by expressing the requirements of the originators in the terminology used by printing and related trades.
- Gives advice and guidance to editors and writers producing promotional and other material on the assembly of copy, selecting of type faces, layout and format, use of colour, and limitations and advantages of different processes with regard to time, cost, quality, general appearance, delivery date and budget. 20
- Provides advice on estimates and on cost control for publications
 - by ensuring that authority for expenditures is obtained,
 - by making cost estimates of specific jobs when required,
 - by participating in compiling information, for inclusion in annual estimates, on the costs of production of publications and exhibits, and
 - by supplying progressive estimates as jobs near completion. 10
- Performs related duties such as certifying for payment invoices and accounts, negotiating the apportionment of costs for shared publications, and representing the department on various committees concerned with the production of publications and exhibits. 10

Specifications

DegreePoints

Knowledge

The work requires a thorough knowledge of type faces and their uses, of typesetting and production methods and their applications and limitations, and of graphic art techniques and practices and the effective presentation of graphic, illustrative and textual material. It also requires a good knowledge of government procurement regulations, particularly those applicable to art work and printing and related services. It requires skill in drafting detailed specifications and other documents for the procurement of printing and related services, and in negotiating the purchase of design and art work from commercial firms. It also requires skill in scheduling and co-ordinating projects in which the various stages require different periods of time to complete and which frequently overlap. The knowledge is normally acquired by training in graphic arts and a number of years of experience co-ordinating and scheduling the production of a variety of publications and promotional material.

6 245

Technical Responsibility

The work requires initiative and judgement in determining requirements, identifying the most effective treatment of presentation, and scheduling and co-ordinating a variety of publications and promotional material used in support of a continuous information program and for special projects. It also requires participation in publication design where the objectives must be achieved within a given budget

D2 200

| | <u>Degree</u> | <u>Points</u> |
|--|---------------|---------------|
| <p>and the limitations imposed by regulations governing printing and related services. New approaches and designs for promotional or informational material are developed to achieve results indicated in general terms by originators. Decisions affect the timely procurement, cost and quality of graphic and printed material, and the effectiveness of Information Service Branch publications in achieving objectives.</p> | | |

Responsibility for Contacts

| | | |
|--|--|----|
| <p>The work requires contacts with departmental officers to plan the production of graphic and printed material, determine priorities and completion dates, estimate project costs, and recommend alternative means of production to achieve the desired results or remain within the budget. It also requires contacts with technical representatives of the office of the Queen's Printer and of outside graphic arts firms to resolve problems encountered in production.</p> | | 85 |
|--|--|----|

Conditions of Work

| | | |
|---|---|----|
| <p>Concentration - The work requires attention when developing specifications for a given <i>job</i> to ensure consistency of design, format, good quality and taste commensurate with the funds available and when reviewing the work at varying stages of completion to ensure adherence to specifications.</p> | 1 | 10 |
|---|---|----|

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| <p>Physical Effort - The work is performed in an office and requires little physical effort.</p> | 1 | 10' |
|--|---|-----|

| | | |
|---|--------|----|
| <p>Environment and Hazards - The work is performed in an office and does not require exposure to risk of injury or illness.</p> | A 1 | 10 |
|---|--------|----|

Supervision

| | | |
|--|----|----|
| <p>The work requires supervising one technician and one clerk-typist, instructing them in work methods, assigning and reviewing work, resolving problems and reporting on performance.</p> | B2 | 15 |
|--|----|----|

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 12

Level:

Descriptive Title: SHIP OPERATIONS OFFICER

Point Rating: 659

Summary

Under the general direction of the Chief, Ship Division, Department of Energy, Mines and Resources, develops and recommends methods, procedures and guide-lines to ensure the legal, safe, uniform and efficient operation of ships in the Marine Sciences Branch fleet used to support hydrographic and scientific research parties; participates in the development and implementation of policy on service conditions and welfare for departmental maritime personnel; and performs other duties.

Duties

% of Time

- Develops and recommends methods, procedures and guide-lines to ensure the legal, safe, uniform and effective operation of ships used in hydrographic and scientific research programs conducted by the Department of Energy, Mines and Resources
 - by studying Acts of Parliament and directives and guide lines issued by Treasury Board and other federal authorities,
 - by compiling and drafting Ship General Orders with respect to ship operation,
 - by compiling and drafting Branch Ship Instructions to detail the duties and responsibilities of personnel and the operating procedures to be followed in the fleet,
 - by making submissions to higher authority for the consideration of all instructions and orders and to seek authority for their distribution, and
 - by providing advice and assistance to the Chief, Ship Division, on matters relating to navigation, seamanship and ship husbandry.

- Participates in the development of recommendations for changes to regulations governing service conditions and welfare arrangements for departmental maritime personnel
 - by attending committee meetings to discuss and resolve personnel problems that occur in the fleet,
 - by participating as a member of the departmental team at the annual conference of master's and chief engineers,
 - by keeping Treasury Board staff informed of shipboard living and working conditions in the fleet,
 - by studying reports on disciplinary and other personnel problems attributable to long periods on station,
 - by compiling, drafting and issuing after approval directives on working conditions for the employment of ships' officers and crew,
 - by drawing up specifications, scales of issue and regulations for uniforms worn by ships' officers and crew, and
 - by representing the department on Treasury Board committees concerned with ships' complements.

45

40

% of Time

- Performs other duties such as determining requirements for personnel, compiling information on which to base recruiting action, interviewing applicants for deck officer positions, developing and implementing training programs including syllabi, standards and associated records, and developing a career planning program for maritime personnel. 15

Specifications

Degree Points

Knowledge

The work requires a thorough knowledge of navigation, seaman ship, ship husbandry and all regulations, agreements and acts, both national and international, applicable to the operation of ships. It also requires a good knowledge of government personnel and financial rules and regulations, and the administrative procedures of the Marine Sciences Branch. The work requires skill in relating ships and equipment to the operating requirements of the Marine Sciences Branch and developing recommendations, instructions and orders to implement new, or change existing, manning and operating procedures and methods. It also requires skill in all aspects of ship handling. This knowledge is normally obtained through the acquisition of a master's certificate for foreign-going vessels and progressively responsible experience in positions with closely related duties.

7 280

Technical Responsibility

The work requires initiative and judgement in analysing reports on operations and problems, identifying essential services, and developing recommendations, instructions and orders to provide direction and guidance on the manning and operation of ships used in support of hydrographic and scientific research parties. Initiative and judgement is also required in developing policy recommendations on service conditions and on the regulations under which ships' crews work, adapting and modifying accepted maritime practices, developing new approaches to resolve personnel and operational problems, and devising methods and procedures to provide effective support to the research parties. Recommendations and decisions affect the maritime personnel of the department and the effectiveness of operation of the fleet.

U4 264

Responsibility for Contacts

The work requires contacts with officials in the department to seek guidance on administrative procedures and on recruiting and personnel problems, with officers in other departments and the

| | Degree | Points |
|--|----------------|--------|
| Armed Forces to discuss problems arising from ship operation, and with officials such as marine superintendents of commercial shipping firms to seek information on ship operation and personnel management. | B3 | 75 |
| <u>Conditions of Work</u> | | |
| Concentration - The work requires normal attention when evaluating ships and equipment in terms of the actual operating requirements of the branch and when developing or modifying instructions and orders that will ensure maximum support for scientific parties, safe shiphandling and good crew morale. | 1 | 10 |
| Physical Effort - The work is performed in an office and requires little physical effort. | 1 | 10 |
| Environment and Hazards - There is little risk of injury or illness arising from work in an office environment. | A ₁ | 10 |
| <u>Supervision</u> | | |
| The work requires explaining work requirements to departmental secretarial and clerical staff. | A ₁ | 10 |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 13

Level:

Descriptive Title: SPECIFICATIONS WRITER

Point Rating: 368

Summary

Under the general supervision of an engineer or technologist in a design directorate or division, writes and edits specifications and purchase descriptions, including amendments and supplements, for a designated range of technical equipment; collects and supplies technical information to procurement agencies for inclusion in contract demands, tenders and contracts; co-ordinates the processing of equipment failure reports; and performs related duties.

Duties

% of Time

- Writes and edits specifications and purchase descriptions, including amendments and supplements, to facilitate the orderly procurement of a designated range of technical equipment
 - by reviewing technical notes and data provided by the design staff to remove ambiguous terms and statements and to group the data according to prescribed format,
 - by obtaining legal clearance on proprietary rights, patent and contractual clauses,
 - by reviewing drawings, standard specifications, standards and other call-up documents for completeness and compatibility with the specification or purchase description,
 - by indicating test and proof requirements,
 - by arranging provision of quality control and inspection standards for inclusion in the specifications or purchase description documents,
 - by proofreading the final draft and obtaining approval from the project manager for reproduction and release, and
 - by supplying additional information and clarification when requested by procurement agencies and manufacturers.

- Collects and supplies the technical content of contract demands, tenders and contracts
 - by discussing the technical requirements with the design authorities concerned,
 - by drafting basic support documents and forwarding them to appropriate engineering directorates for concurrence,
 - by forwarding support documents to procurement agencies after concurrence has been obtained,
 - by reviewing draft and final contract demands and contracts for correct nomenclature, stock number, procurement data and contractual clauses,
 - by obtaining concurrence from the engineering directorates and forwarding draft contract demands to procurement agencies,
 - by checking tenders for deviations from purchase data, obtaining comments from engineering directorates and informing procurement agencies,

65

15

%of Time

- by forwarding technical data to other agencies interested in the procurement action, and
- by advising engineering directorates of completed contracts.
- Co-ordinates the processing of equipment failure reports ,
 - by recording, stamping and forwarding reports to appropriate engineering directorates,
 - by obtaining disposal instructions for defective parts and advising users and stores depots, 10
 - by proofreading equipment failure investigation duplimats specifying the number of copies required and arranging for printing, and
 - by informing the manufacturer of details of equipment failure investigations.
- Performs related duties such as representing the specifications group at meetings, studying specifications, standards and hand-books issued by other agencies and which are related to duties, keeping records and conducting correspondence. 10

Specifications

Degree Points

Knowledge

The work requires a knowledge of departmental procurement procedures and of technical terminology pertaining to a variety of technical equipment. It requires skill in identifying, compiling and presenting technical information, drafting specification and purchase description documents, reading blueprints and drawings, and processing equipment failure reports. This knowledge is acquired by in-job training and several years' experience maintaining and operating related equipment and drafting and editing technical documents. 3 140

Technical Responsibility

The work requires initiative and judgement in identifying, compiling and presenting technical information, and writing and editing specifications, purchase descriptions and related technical documents. The work is performed according to a prescribed format and established procedures. Initiative and judgement are also required in determining conditions and circumstances under which departures from these guide-lines are warranted. Decisions affect the orderly procurement of equipment, relations with contractors and involvement of senior staff. B2 128

Responsibility for Contacts

The work requires contacts with personnel of design staff to clarify requirements, and with associates in procurement B2 60

agencies and representatives of manufacturers to answer questions about specifications and related technical documents.

Conditions of Work

| | <u>Degree</u> | <u>Points</u> |
|---|---------------|---------------|
| Concentration - The work requires normal attention when collecting and reviewing technical data for inclusion in specifications and when checking final drafts of technical documents to ensure completeness and compatibility. | 1 | 1.0 |

| | | |
|---|---|----|
| Physical Effort - The work is performed in an office and requires little physical effort. | 1 | 10 |
|---|---|----|

| | | |
|---|----------------|----|
| Environment and Hazards - The work environment is good, with little if any risk of injury or illness. | A ₁ | 10 |
|---|----------------|----|

Supervision

| | | |
|---|----------------|----|
| The work requires explaining work requirements to the administrative support staff. | A ₁ | 10 |
|---|----------------|----|