STATE OF WISCONSIN PERSONNEL COMMISSION

PAUL BLOOM,

Appellant,

v.

Secretary, DEPARTMENT OF EMPLOYMENT RELATIONS,

Respondent.

Case No. 92-0088-PC

FINAL DECISION AND ORDER

A proposed decision and order was issued in this matter on June 25, 1993 The respondent filed objections. A copy of the proposed decision and order is attached hereto. The Commission rejects certain portions of the proposed decision and order as noted below. The remaining portions of the proposed decision and order are adopted.

Finding of fact #16 is added

16. The appellant's duties and responsibilities fall within the scope of the IM Inclusions statement. More than 50% of the appellant's time is spent performing duties identified as work examples under the IM-Advanced level. Appellant performs 10 of the 16 work examples listed at that level. Appellant also performs 5 of the 6 work examples listed for the IM - Entry & Journey levels.

Conclusion of law #3 is revised to read·

3. Appellant has not sustained his burden of proof and the Commission concludes that respondent's decision allocating the appellant's position to the Instrument Maker - Advanced level was not incorrect.

The first full paragraph on page 6 of the proposed decision and order is deleted.

The following footnote is added at the end of the partial paragraph found at the beginning of page 7

[0]The IM Inclusion statement provides in part: "Positions in this series generally work with machine shop equipment when constructing instruments." (emphasis added) The fact that appellant only spends 15% of his time using machine shop equipment, and 85% using other equipment does not take him outside of the series, because the inclusion statement does not restrict the class solely to those positions constructing instruments with machine shop equipment.

The first three full paragraphs on page 7 are deleted and replaced with the following:

While it is true that the ES - Senior representative position describes the appellant's duties, those duties are also very accurately described by a majority of the work examples set forth in the IM series. The appellant admits that his position is accurately described in the IM work examples. According to two witnesses who work at PSL, the appellant is 1) "involved in the design phase of highly specialized parts, machinery and instruments", 2) is involved "typically in constant contact with the user or client..., functioning as a consultant"; 3) is "often responsible for coordinating, assembly and testing projects... which may last six months to a couple of years"; and is considered an expert "in a specialized area."

The appellant contends that because he does not spend most of his time using machining equipment, he does not fit the traditional definition of an instrument maker and does not fit the language in the IM - Entry and Journey levels which are incorporated into the IM - Advanced level definition. The Entry definition refers to positions performing "as a highly skilled and independent machinist or tool and die maker." The Journey level definition refers to performing work similar to IM - Entry positions and the Advanced level definition in turn refers to work similar to the Journey level. When viewed as a whole, the specifications indicate that IM positions will typically utilize machining and tool and die equipment, but positions which use other equipment may also be included. The reading of the specifications that is advanced by the appellant is overly technical and fails to reflect the language in the Inclusion statement and the references in the work examples and the Advanced defini-

tion statement which fall outside the scope of tool and die and machining work. For example, the Advanced level work examples refer to positions which "clean materials used to fabricate ultra high vacuum devices" and "check ultra high vacuum assemblies and devices for leaks." Ultra high vacuum welding is also specifically mentioned as one of the "specialized areas" of expertise which is to be classified at the IM - Advanced level, even though there is no evidence that it falls within the definition of machining or tool and die work. The appellant's position adequately meets the more specific language of the IM - Advanced classification and, as a consequence, is more properly classified there than in the more general language of the ES - Senior level.

The Order is revised to read:

The respondent's decision is affirmed and this appeal is dismissed.

Dated: August 25, 1993 STATE PERSONNEL COMMISSION

DONALD R. MURPHY, Commissioner

K:D:Cover order (Bloom)

JUDY M. ROGERS, Commissioner

Parties:

Paul Bloom
93 Burroughs Drive
Madison, WI 53713

Jon Litscher
Secretary, DER
P.O. Box 7855
Madison, WI 53707-7855

NOTICE
OF RIGHT OF PARTIES TO PETITION FOR REHEARING AND JUDICIAL REVIEW
OF AN ADVERSE DECISION BY THE PERSONNEL COMMISSION

Petition for Rehearing. Any person aggrieved by a final order may, within 20 days after service of the order, file a written petition with the Commission for rehearing. Unless the Commission's order was served personally, service occurred on the date of mailing as set forth in the attached affidavit of mailing. The petition for rehearing must specify the grounds for the relief sought and supporting authorities. Copies shall be served on all parties of record. See §227.49, Wis. Stats., for procedural details regarding petitions for rehearing.

Petition for Judicial Review. Any person aggrieved by a decision is entitled to judicial review thereof. The petition for judicial review must be filed in the appropriate circuit court as provided in §227.53(1)(a)3, Wis. Stats., and a copy of the petition must be served on the Commission pursuant to §227.53(1)(a)1, Wis. Stats. The petition must identify the Wisconsin Personnel Commission as respondent. The petition for judicial review must be served and filed within 30 days after the service of the commission's decision except that if a rehearing is requested, any party desiring judicial review must serve and file a petition for review within 30 days after the service of the Commission's order finally disposing of the application for rehearing, or within 30 days after the final disposition by operation of law of any such application for rehearing. Unless the Commission's decision was served personally, service of the decision occurred on the date of mailing as set forth in the attached affidavit of mailing. Not later than 30 days after the petition has been filed in circuit court, the petitioner must also serve a copy of the petition on all parties who appeared in the proceeding before the Commission (who are identified immediately above as "parties") or upon the party's attorney of record. See §227.53, Wis. Stats., for procedural details regarding petitions for judicial review.

It is the responsibility of the petitioning party to arrange for the preparation of the necessary legal documents because neither the commission nor its staff may assist in such preparation.

STATE OF WISCONSIN PERSONNEL COMMISSION

* * * * * * * * * * * * * * * * * * *

PAUL BLOOM,

Appellant,

v.

Secretary, DEPARTMENT OF EMPLOYMENT RELATIONS,

Respondent.

Case No. 92-0088-PC

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PROPOSED INTERIM DECISION AND ORDER

This matter is before the Commission as an appeal from a reallocation decision. It was consolidated for hearing purposes with two other related matters, Randall v. DER, 92-0084-PC, and Sailor v. DER, 92-0086-PC. The issues for hearing in the three matters was as follows:

> Whether respondent's decision to reallocate appellants' positions to Instrument Maker-Advanced instead of Engineering Specialist-Senior was correct.

FINDINGS OF FACT

1. The Physical Sciences Laboratory (PSL) is a facility operated by the University of Wisconsin. The appellant is employed in the unit of the facility entitled the "Mechanical Group." The function of the PSL that is relevant to this appeal is the production of highly specialized scientific equipment

2. More specifically, the appellant is employed in the PSL support shop which is a separate entity from the PSL machine shop.

3. The support shop functions primarily as a project assembly shop. The work mainly relates to either 1) the fabrication of metal coils for research purposes, where the coils will either contain plasma or guide particle beams, or 2) the construction of wire chambers used in the detection of subatomic particles at accelerator laboratories. The major design of this apparatus is done by engineers. The appellant's primary responsibility is to design, build and oversee the production line necessary for the assembly of the apparatus. Projects usually take from 1 to 2 years to complete and usually involve at least

4 limited term employes who are employed for the actual assembly of the apparatus.

4. The appellant's work in assembling metal coils and wire chambers is not primarily by use of machine tools (e.g., metal lathes, boring machines, milling machines, drill presses). The parts for the apparatus are typically supplied by the machine shop to the support shop for assembly.

5. Appellant's immediate supervisor has been Bill Cotter, Mechanical Shop Supervisor.

6. The appellant's duties are accurately described in his position description, a copy of which is attached hereto and incorporated by reference as part of this finding.

7. Appellant's work is not predominantly that of either a machinist or of a tool and die maker.

8. On larger projects, appellant may supervise limited term employes as well as project employes who have been hired to work on that particular project.

9. Appellant uses the following equipment, in the time percentages shown, for performing his responsibilities:

Type of Equipment	Time %
Mechanics tools (hand tools)	10
Measuring instruments	10
Power hand tools	15
Machine tools (metal working)	15
Power supplies and monitoring equipment	10
Forklift, crane and other lifting equipment	15
Torches and soldering equipment	5
Epoxy applicators, scales and balances	5
Paint booth and sprayers	5
Woodworking equipment	5
Vacuum pumps, compressors	5

10. Immediately prior to June 17, 1990, the appellant's position was classified at the Engineering Technician 5 level.

11. Effective June 17, 1990, the respondent issued a classification specification entitled Engineering Specialist. The specification reads, in part, as follows:

B. Inclusions

This series encompasses professional engineering specialist positions. These positions devote the majority of their time and are primarily responsible for providing engineering specialist duties in their assigned program area. These positions have responsibilities for specific aspects of a larger architecture/engineering management program.

C. Exclusions

Excluded from this series are the following types of positions:

* * *

3. Technical program support assistants, more appropriately identified by other class series such as ... Instrument Maker ... whose work involves complex and specialized electronic, electrical, mechanical, communication or craft functions involving the design, installation, systems analysis, repair, calibration, testing, modification, construction, maintenance or operation of equipment, machines, control systems, instruments or other comparable devices. These positions do not provide direct technical assistance to professional architectural or engineering employes, activities and programs.

* * *

II. DEFINITIONS

* * *

Engineer Specialist - Senior

This is senior level engineering specialist work. Employes at this level differ from lower level positions in that the engineering specialist has responsibilities for a specific program. The incumbent develops and follows broadly defined work objectives and the review of work is limited to administrative evaluation by the supervisor. Positions at this level have extensive authority within their assigned program area. The engineering specialist is considered the expert in the assigned area. Work is performed under direction.

REPRESENTATIVE POSITIONS

Department of Natural Resources

Natural Resources Engineering Technician - Perform technical engineering services for natural resource related facilities which include waterfowl impoundments, rearing ponds, secondary roadways, trails, public access facilities, channel

improvements and water control structures. Inspect existing state-owned facilities and notify managers of existing or potential health and safety code violations and potential maintenance problems.

University of Wisconsin

Engineering Specialist - Responsible for the design, fabrication, and assembly of highly complex mechanical components of scientific instruments and machinery which support research and/or instruction programs in departments or centers. Provide expert consultation to engineers, scientists and students regarding design and fabrication issues and problems, may oversee machining and fabrication operations. The hardware that is build is frequently prototypical (one-of-a-kind) and may require the development of unique, innovation methods or machining and fabrication. These positions function at a level of technical expertise and skill above that normally identified in Instrument Maker positions.

12. Pursuant to the implementation of the ES specifications, the appellant's position was reallocated to the ES - Senior level, effective June 7, 1990.

13. The appellant's duties and responsibilities fall within the scope of the ES Inclusions statement and the ES-Senior Definition statement. The appellant's duties are accurately described by the ES-Senior representative position under the heading of the University of Wisconsin.

14. Effective February 9, 1992, respondent issued a new position standard for the Instrument Maker (IM) series. The position standard is attached to this decision and is included in this finding.

15. The appellant's position was reallocated to the IM - Advanced level, effective February 9, 1992. The appellant subsequently appealed the reallocation decision to the Personnel Commission.

CONCLUSIONS OF LAW

1. This matter is properly before the Commission pursuant to §230.44(1)(b), Stats.

2. Appellant has the burden of proving by a preponderance of the evidence that respondent erred by reallocating the appellant's position from the Engineering Specialist - Senior level to the the Instrument Maker - Advanced level.

3. Appellant has sustained his burden of proof and the Commission concludes that respondent's decision allocating the appellant's position to the Instrument Maker - Advanced level was incorrect.

OPINION

The appellant is one of three persons whose positions at the PSL were reallocated, effective February 9, 1992, from the Engineering Specialist - Senior (ES - Senior) level to the Instrument Maker - Advanced level as part of a classification survey which included the promulgation of a new position standard for the Instrument Maker series. The appellant contends that his position is better described by the ES - Senior specification which was issued about 18 months earlier.

The respondent offered testimony from the drafter of the ES specifications in an effort to describe the classification route followed by the appellant's position. The witness testified that the appellant's position was one of several positions at the PSL which had effectively "outgrown" the existing Instrument Maker specifications in the 1980's. The positions were moved to the Engineering Technician 5 level. Early in the course of carrying out the Engineering classification survey, respondent concluded that these positions were not properly assigned to the Engineering Technician series, but they were unwilling to return the positions to the existing IM series because to do so would have resulted in a demotion and the available compensation information indicated that these positions were already below the market midpoint. As a consequence, the respondent opted to include them within the scope of the Engineering survey in a "holding pattern" until respondent had the opportunity to carry out a new survey which included positions in the existing IM series. This was accomplished by including a representative position at the ES - Senior level and reallocating the appellant's position to that level as part of the Engineering survey, effective June 17, 1990. Respondent included the appellant's position as well as positions in the existing IM series as part of the Maintenance Mechanic and related survey. This survey resulted in the issuance of a new IM series.

Respondent's witness also testified that respondent intends to remove the UW representative position at the ES - Senior level when the ES specifica-

tions are rewritten, which is to occur after all appeals from the Engineering Survey have been decided.

In this case, there is specific language in each of two specifications which describe the appellant's position. However, there is also language in the IM series which indicates that its focus is on positions which are performing "machinist or tool and die maker" responsibilities. Because the appellant spend only a very small percentage of his time on those duties, and because his position is very clearly identified at the ES - Senior level, his position is more properly classified according to the more general language of the ES - Senior level.

In Foris v. DHSS & DER, 90-0065-PC, 1/24/92, the Commission explained its analysis of a classification dispute as follows:

> In general, Examples of Work Performed as identified in a classification specification are designed to be just "examples." These examples are not meant to be all inclusive of every position identified at a particular classification level. It is also not unusual to find that the duties and responsibilities of a position might be identified in more than one specification as examples of work performed.
>
> A classification specification must be read in its entirety as one document. Segmenting a specification and attempting to find *specific words or phrases which can be matched to the duties and* responsibilities assigned to a position is not dispositive of the appropriate classification of a position. The duties and responsibilities of the position and the classification specification must be reviewed in their entirety to determine the best fit.

The Commission has also previously analogized class specifications to a set of statutes or administrative rules in terms of applying rules of statutory construction when interpreting the specifications. Klepinger v. DER, 83-0197-PC, 5/9/85; reversed on other grounds by Dane County Circuit Court, DER v. Wis. Pers. Comm., 85-CV-3022, 12/27/85.

In Green Bay Education Assoc. v. Dept. of Public Instruction, 154 Wis.2d 655, 453 N.W.2d 250 (Ct. App., 1990), the court relied "upon the accepted rule of construction that the most recent and most specific statute prevails when construing statutes that appear to be in conflict." (citation omitted)

Here the most recent specification is clearly the IM series. One clear indication of this relative specification of the two series is the high degree of variation between the two representative positions identified at the ES - Senior

level. One representative position, that of the DNR Engineering Technician works on ponds, roadways and trails, while the representative position at the UW is described as working on highly complex scientific instruments. In addition, respondent's witness testified that the allocation of the appellant's position to the ES - Senior class was only intended to be a holding pattern until such time as the IM survey could be completed. The IM Inclusion statement and the IM - Advanced definition are both more specific than their counterparts found in the ES series.

However, the IM - Advanced definition includes, by reference, language from the IM - Entry and Journey levels which do not describe the appellant's duties. The Entry definition refers to positions performing "as a highly skilled and independent machinist or tool and die maker." The Journey level definition refers to performing work similar to IM - Entry positions and the Advanced level definition in turn refers to work similar to the Journey level.

If there was no appropriate alternative classification, the IM - Advanced level might be considered as adequately describing the appellant's duties because 1) more than 50% of the appellant's time is spent performing duties identified as work examples under the IM - Advanced level; 2) appellant performs 10 of the 16 work examples listed at that level; and 3) appellant also performs 4 of the 5 work examples listed for the IM - Entry & Journey levels.

However, here there is an alternative series which includes broad definitional language and which includes a representative position which very accurately describes the appellant's responsibilities. The Commission notes the respondent has indicated an intent to do away with this representative position in the near future, but it had not been deleted from the ES specifications at the time of the subject reallocation action. It remains viable for the purpose of deciding this appeal. Under these circumstances and given the absence of any comparison non-machinist positions at the IM - Advanced level, the respondent's action of reallocating the appellant's position from the ES - Senior level must be rejected.

In a letter to the hearing examiner after the respondent submitted its posthearing brief, the appellant requested a "new and separate hearing" because the respondent had allegedly breeched a prehearing agreement made between the parties that the three related cases (Case Nos. 92-0084, 86, 88-PC) would be given "separate consideration" other than in terms of offering cer-

tain common testimony. The appellant noted that the respondent's posthearing brief lumped his position in with those of the other two appellants without referencing any distinguishing responsibilities. Appellant also objected to the statement in respondent's brief that the ES - Senior representative position at the UW would be deleted from the ES series when that series is next updated.[1]

In response to the appellant's letter, the Commission notes that it has separately considered the appellant's position, rather than treating it the same as the positions involved in the two related appeals. By not making that distinction in its brief, the respondent simply gave up its opportunity to offer arguments which were specific to the appellant's duties. In reaching its decision, the Commission has relied upon the ES and IM specifications as they existed on February 9, 1992. The representative position at the ES - Senior level remained in the specifications at that time, as it was at the time of hearing.

The appellant had a full opportunity to offer evidence in support of his appeal. All of the appellants in the three related appeals were provided an opportunity to ask questions of each witness, to offer their own exhibits, to call their own witnesses and to make their own arguments. The appellant is not entitled to an additional hearing opportunity on his appeal. Duties and responsibilities first assigned after the effective date of a classification decision are not relevant in a review of the correctness of that decision.

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[1] Appellant suggested that if respondent could make this statement, appellant should be permitted to offer evidence of those duties which he assumed after February 9,1992, the effective date of the decision being appealed.

ORDER

The respondent's decision is rejected and this appeal is remanded for action in accordance with this decision.

Dated:_____, 1993 STATE PERSONNEL COMMISSION

_____
LAURIE R. MCCALLUM, Chairperson

KMS:kms
K:D:Merits-reall (Bloom2)

_____
DONALD R. MURPHY, Commissioner

_____
JUDY M. ROGERS, Commissioner

Bloom v. DER
92-0088-PC

January 15, 1992

Engineering Specialist - Sr.

Position Summary: This position carries responsibilities involving the design; construction, assembly, testing, and installation of highly specialized equipment which is produced by the Physical Sciences Laboratory for use at research institutions around the world.

85% A. This position provides unique, expertise that impacts the design, construction, assembly, testing, inspection construction and installation of scientific apparatus such as magnetic coils and drift chambers for particle accelerators and detectors built by the Physical Sciences Lab for national research centers.

Design (20%)

A1 Conceptual Design - Functioning as an integral member of the design group, this position assists in the conceptual design of highly sophisticated and complex precision scientific equipment by providing specialized knowledge of magnetic coil and drift chamber fabrication and construction.

A2 Working Design - This position is responsible for taking the conceptual design and transforming it into a practical, buildable working design by working with engineers, drafting and instrument shop staff.

A3 Develops, constructs and tests scaled down working models of instruments to establish feasibility of design and construction techniques.

A4 Assists engineers, shop supervisor and mechanical coordinator in estimating production cost.

Construction (45%)

A5 Position is responsible for checking assembly drawings, detail drawings, and parts lists for accuracy prior to fabrication.

A6 Will designate the proper sequences of machining, cleaning, and assembly operations to be followed.

A7 Fabricates new and/or modifies existing fixtures and test equipment that are necessary to facilitate the fabrication of parts or assembly of equipment.

A8 Depending on complexity, may build prototypes of the parts to establish a machining and assembly procedures to be followed by the shop.

A9 Coordinates and supervises the construction of major components (e.g. coils, stands, and chambers) of the instrument.

Inspection, Final Assembly, and Testing (20%)

A10 Designs and fabricates ,specialized devices to check the accuracy and performance of parts, both purchased and fabricated.

A11 Assembles and tests final assemblies and equipment to assure conformance with design specifications.

A12 Will make corrections to or redesign parts and assemblies as necessary to make assemblies work.

5% B. This position is responsible for scheduling the assembly of apparatus and for planning and coordinating the installation of equipment at various research institutions around the world.

B1 Coordinates and supervises the disassembly, crating of instrument for shipment, and arranges transportation of instrument and equipment, tooling and testing devices required to install instrument off site.

B2 Assembles and tests the instrument at customers site and assures it conforms to design specification and operating requirements.

B3 May make corrections to or redesign parts and assemblies on site as necessary.

5% C. Outside Inspection

C1 This position is responsible for performing inspection and acceptance of components and assemblies fabricated by outside vendors, both on site and off.

5% D. Responsible for maintaining status and upkeep of PSL equipment and fixturing as to location, usage.

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Personnel
Commission

Effective Date: February 9, 1992

STATE OF WISCONSIN
POSITION STANDARD

INSTRUMENT MAKER

Respondent's Exhibit # 1

I. INTRODUCTION

A. Purpose of This Classification Specification

This classification specification is the basic authority [under Wis. Admin. Code ER-Pers 2.04] for making classification decisions relative to present and future Instrument Maker positions. Positions allocated to this series are primarily responsible for providing specialized machinist or tool and die work. This classification specification will not specifically identify every eventuality or combination of duties and responsibilities of positions that currently exist, or those that result from changing program emphasis or organizational structures in the future. Rather it is designed to serve as a framework for classification decision-making in this occupational area.

B. Inclusions

This series encompasses Instrument Maker positions found in the Technical Bargaining Unit, and located at colleges throughout the University of Wisconsin System. These positions devote the majority of their time and are primarily responsible for the design, construction, inspection, testing and possibly shipping of highly specialized equipment including but not limited to mechanical, laboratory and precision instruments. Positions in this series generally work with machine shop equipment when constructing instruments.

C. Exclusions

Excluded from this series are the following types of positions:

1. Maintenance positions, more appropriately identified by other class series such as Maintenance Mechanic, Automotive Mechanic, Facility Repair Worker, etc., whose work includes building mechanical systems maintenance, automobile maintenance, building maintenance or other types of maintenance;

2. Engineering Specialist positions whose work is primarily responsible for specific aspects of a larger architecture/engineering management program;

3. Mechanician positions whose work is primarily involved with modification and maintenance of equipment;

4. Equipment Fabricator positions whose work includes modifying trucks, tractors, trailers and other specialized equipment for fire control units and other Department of Natural Resources functions;

5. All other positions which are more appropriately identified by other series.

D. Entrance and Progression Through This Series

Employes typically enter this classification series by competitive examination for entry-level positions. Progression to the journey-level will normally occur through reclassification. Progression to the advanced-level will normally occur through competitive examination. However, reclassification of a position from the journey-level to the advanced-level may be permitted when it can be demonstrated that the change in duties and responsibilities justifying the class change are a logical and gradual outgrowth of the positions's previous duties and responsibilities. It is anticipated that not all positions in this series will reach the advanced-level.

E. Classification Factors

Individual position allocations are based upon the ten Wisconsin Quantitative Evaluation System (WQES) factors: Knowledge; Discretion; Complexity; Effect of Actions; Consequence of Error; Personal Contacts; Physical Effort; Surroundings; Hazards; and Leadwork/Supervisory Responsibilities. Please refer to the WQES Master Guidecharts for explanations of each of these factors and their corresponding levels.

F. How To Use This Classification Specification

This classification specification is used to classify Technical Bargaining Unit positions as described under Section B of this classification specification. In most instances, positions included in this series will be clearly identified by one of the classification definitions which follow below in Section II. However, a position may evolve or be created that is not specifically defined by one of the classification definitions. In classifying these positions, it would be necessary to compare them to the classification definitions based on the factors described in Section E of the classification specification.

II. DEFINITIONS

INSTRUMENT MAKER - ENTRY

Under limited, progressing to general supervision, performs as a highly skilled and independent machinist or tool and die maker in the design and creation of unique, highly intricate and precise scientific equipment. Recommends and aids in the layout, design and construction of research instruments utilizing their knowledge of materials, methods, and machine tools to fabricate the required item. Receives direction in the form of blueprints, sketches, and oral descriptions, which may give only details of specific components, with the remainder of the instrument design left to the initiative of the person assigned the project.

INSTRUMENT MAKER - JOURNEY

Under general supervision performs work similar to Instrument Maker-Entry positions. However, the Instrument Maker-Journey position functions more independently and with greater efficiency. This type of independence and efficiency is generally gained through one to two years of experience as an Instrument Maker or other comparable experience in machinist or tool and die work.

INSTRUMENT MAKER - ADVANCED

This is advanced level Instrument Maker work. The work performed is similar to the journey-level except that employes at this level are significantly more involved in the design phase of highly specialized parts, machinery and instruments. Advanced instrument makers are typically in constant contact with the user or client, usually graduate students, professors and researchers, functioning as a consultant to them. In addition,

advanced level instrument makers are often responsible for coordinating, assembling and testing projects. The projects may last six months to a couple of years and require thousands of individual parts. Also, employes at this level are considered experts (i.e., they have advanced knowledge, skills and experience) in a specialized area, such as, but not limited to, high vacuum welding, complex project coordination or student machine shop coordination with an emphasis on providing instruments for advanced scientific research.

III. EXAMPLES OF WORK PERFORMED

Instrument Maker - Entry & -Journey

Produce and assemble unique scientific parts using lathes, milling machines, boring mills, drill presses and other related machines and equipment.
Assist in the designing and building of jigs, fixtures and tools by performing machining operations that cannot be accomplished by conventional methods.
Repair and maintain laboratory instruments.
Design and construct laboratory, teaching and related equipment.
Performs standard welding using a variety of materials including steels, stainless steels, aluminum and other non-standard alloy metals used in the fabrication of parts and equipment.
Set up and operate machine tools for machining task at hand using standard and exotic materials and maintaining tolerances.

Instrument Maker - Advanced

With greater independence, knowledge, skill and latitude in the initiation of action, may perform any of the duties and responsibilities assigned to the Instrument Maker-Entry or -Journey, and in addition may:

Design, construct and refine sophisticated laboratory instrumentation for ultra-high vacuum, optical, particle beam and surface research.
Procure construction and supply materials for projects.
Supervise graduate students in the design and construction of specialized research instrumentation.
Function as the director of a mechanical shop facility in a large science department.
Design, construct and install complex mechanical systems; select materials to use; fabricate equipment and redesign projects.
Schedule work, maintain and calibrate machines, and manage tool, fastener and material inventories.
Maintain the machine and welding shop facility of the Synchrotron Radiation Center.
Design and construct highly specialized, complex instrumentation in the prototype phase.
Coordinate machining, welding, assembling and testing of assemblies.
Travel to facilities as required for final assembly, inspection and testing.
Direct machining and assembly work performed by other staff such as Instrument Maker-Entry and Journey positions, Mechanicians or graduate students.
Clean materials used to fabricate ultra high vacuum devices, instruments and assemblies.
Check ultra high vacuum assemblies and devices for leaks.
Maintain and calibrate high vacuum equipment and testing instruments.
Oversee and manage a department machine shop, wood shop and hydraulics laboratory.
Perform advanced design, development, construction, final assembly and testing of sophisticated equipment and precision instruments for research and instruction in the field and laboratory.

IV. QUALIFICATIONS

The qualifications required for these positions will be determined at the time of recruitment. Such determinations will be made based on an analysis of the goals and worker activities performed and by an identification of the education, training, work or other life experience which would provide reasonable assurance that the knowledge and skills required upon appointment have been acquired.

TH
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