BULLETIN 96 - 01 **Date: October 10, 1995**

U.S. Department of Labor Employment and Training Administration Office of Apprenticeship Training, Employer Labor Services (OATELS) Washington, D.C. 20210	Distribution: A-541 Headquarters A-5465 All Field Tech A-547 SD+RD+SAC+ Lab Com	Subject: New Apprenticeable Occupation --Inspector, Metal Fabricating Code: 200
Symbols: DNIP:BAJ		Action: Immediate

PURPOSE: To inform Office of Apprenticeship Training, Employer Labor Services (OATELS), Bureau of Apprenticeship and Training (BAT) Staff of a new apprenticeable occupation

Inspector, Metal Fabricating
O*NET Code: 51-2041.01
RAIS Code: 0325
Training Term: 8000 hours (4 years)
Type of Training: Time - based

BACKGROUND: Request for apprenticeability consideration for this occupation was submitted by ATR Wayne Roy, Marquette, MI, for DURA Automotive Systems, Inc., Mancelona, MI.

The sponsor, in order to maintain its competitive edge in a world wide industry, has re-engineered its training, production, and quality control through the expansion of its registered apprenticeship program.

We appreciate the efforts Mr. Roy made in expanding apprenticeship into this new area.

A suggested work process schedule and outline of related instruction| is attached.

This occupation will be added to the Bureau's list of recognized| apprenticeable occupations.

For further information contact ATR Wayne Roy.

NOTE: This Bulletin is being sent via AIMS Mail System (E-Mail). Bureau State Directors should provide copies to their SAC customers as appropriate.

Attachments

WORK PROCESS SCHEDULE
INSPECTOR, METAL FABRICATING
O*NET Code: 51-2041.01 RAIS Code: 0325

DESCRIPTION: Conducts dimensional inspection of components and assemblies to verify conformance to blueprint specification or industry standards, using micrometers, calipers, height gauges, surface plate, coordinate measuring machine, gauge blocks, pins gauges, thread gauges, optical comparator and indicators: Applying knowledge of blueprint reading, geometric design and tolerances, geometry, trigonometry, statistical process control, gauge calibration and control, and metric systems. May design and fabricate templates or fixtures to aid the dimensional inspection process and maintain inspection fixtures and gauges.

On-the-Job Training:
Apprentices shall receive instruction and experience on machines and processes listed, though not necessarily in the order given. The purpose of this schedule is to give experience and instruction in all branches of the trade, as necessary to develop a practical and thoroughly skilled craftsperson, with allowances for variable conditions.

APPROXIMATE HOURS

JOB ORIENTATION – 2000
Learn the names and types of tools used; learn the use of customer gages and checking fixtures, the quality system within the plant, the shop rules and regulations pertaining to quality, quality room and shop layout.

STATISTICAL PROCESS CONTROL – 500
Become familiar with the theory and application of SPC. Be able to do data gathering and analysis for variable and attributes studies including x-bar and R charts, pareto charts, histograms, P, NP, and C charts.

SYSTEMS KNOWLEDGE – 1000
Become familiar with the requirements of the customers quality systems, including sample submission procedure, customer reject procedure. Learn to assess shop quality systems for conformance to customer requirements.

BLUEPRINT READING – 1500
Reading a blueprint to determine vehicle location of the part, critical dimensions, visual requirements. Use of blueprints to determine variation from specification, use of blueprint for doing part layouts for customer sample approval.

LAB TESTING – 500
Learn the various lab analysis procedures that can be performed in the plant for metal, paint. Become familiar with the established industry system for obtaining analysis on parts for tests that cannot be performed in plant. Become familiar with the terminology and test procedures for anodized, heat treated, chrome plated, and painted parts. Be able to co-relate test results with part quality.

FIXTURE DESIGN – 725
Learn various methods of mechanical fixturing that are common to product manufactured. Develop and use fixtures in the inspection process.

COORDINATE MEASURING MACHINE – 725
Become familiar with and use the CMM to determine conformance in the inspection process.

SURFACE PLATE – 1000
Learn the use of surface plate measurement techniques.

SURFACE PROCEDURES AND PRACTICES –
50
Tool safety and first aid.

TOTAL **8000**

Related Instruction:
A minimum of 576 classroom hours in related training courses is required. The recommended courses provide the core of the training plan. Select from the list of elective courses below to complete the requirements.

RECOMMENDED COURSES	**HOURS**
Beginning Algebra	64
Math for Manufacturing	32
Measurements & Inspection	32
College Algebra & Trigonometry	80
Physics/o5l Physics Lab	80
Print Reading & Sketches	48
Engineering Drawing	64
Detail Drafting	64
Fixture Design	64
Geom. Dimensions & Tolerances	16
SPC I	16
SPC II	16
TOTALS	**576**

ELECTIVES	
Machining I	64
Jig Design	48
Introduction to PC	48
Autocad I	32
TOTALS	**192**