

JOB SPECIFICATION

Job Title : MAINTENANCE FITTER LEVEL - 3

Sector : MECHANICAL

Sub-Sector : PLANT MAINTENANCE

2048.3.26

Bhau

Shelr

SP  
RJ

MF3C

JOB SPECIFICATION

1 JOB TITLE: MAINTENANCE FITTER  
LEVEL : 3

JOB DESCRIPTION

2 A maintenance fitter examines faulty machinery and equipments for the faults, dismantles equipment, replaces defective parts with repaired or new one, repairs/fabricates the defective parts and installs the machinery and equipment.

LIST OF TASKS

- 3
- 1 Testing and fault finding (Including hydraulic and pneumatic tools and equipments)
  - 2 Repairing defective parts
  - 3 Fabricating required mechanical parts
  - 4 Assembling, refitting, adjusting, replacing components of machinery equipment.
  - 5 Installing machinery/equipment

QUALIFYING NOTES (entry requirements etc)

4 Physical requirement:- No special requirement(normal health)  
Educational requirement:- Able to understand basic specification.

*Smith*

*Sp. Braunko*  
*AD*

MF31

TASK SPECIFICATION

5

TASK TITLE : NO 1

TESTING AND FAULT FINDING

JOB TITLE: MECHANICAL FITTER (LEVEL 3)

TASK ELEMENTS

6

- 1 Receives manufacturer's instructions/drawing/manuals/informatio about themalfunctioning
- 2 Determines methods and sequence of operation for testing
- 3 manipulates the control to determine system or unit inoperative, loss of power in system system not fuctioning to desinged specifcation, noise or other unwanted phenomenon.
- 4 Adjusts, sets or regulates the equipment settings to determine the location intensity and type of malfunction.
- 5 Uses measuring instruments/tools to determine the intensity and type of fault including wear
- 6 Records, marks the idnetified faults in the machinery/equipment.

*S. S. Bhatnagar*  
*Sp.*

TASK SPECIFICATION

MF32

PERFORMANCE REQUIREMENTS

- 1 Steel ruler
- 2 Vernier Caliper
- 3 Inside and outside micrometer
- 7 4 Feeler gauge
- 5 Dial gauge
- 6 Screw drivers (3,4,5) and including phillips
- 7 Hand tools
- 8 Tools specified in the manual of the equipment.

TASK PERFORMANCE STANDARDS

8 Controls of the machine/equipment operated safely to determine the fault, regulators manipulated safely to required position. The intensity and type of faults determined by safe use of measuring instruments/tools. The required fault found out and recorded accordingly.

*Sd/-*  
*Bhawanish*  
*Sp.*  
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MF373

FABRICATING REQUIRED MECHANICAL PARTS

TASK SPECIFICATION

TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGIENE
X 1	1	Knowledge about referring manufacturer's manual. Ability to interpret manufacturer's manual correctly. 2 Principle of testing and fault findings:  3 Knowledge about the controls of the equipment and its general performance.  4 Procedure for determining or trouble shooting the equipment while in operation.  5 Knowledge and care of measuring instruments relating to testing and fault findings.  6 Knowledge about standard diagrammatic flow charts/recording system.		sketches, drawings symbols in manuals	Hazards due to wrongly manipulated controls.

Sredw  
Bruce Ap  
Sp.

MF 314

PERFORMANCE TEST (skill assessment)

TITLE: MECHANICAL FITTER (LEVEL 3) TASK NO: 1	LOCATION OF TEST CANDIDATE'S NAME EVALUATORS NAME	LOCATION OF TEST CANDIDATES NAME EVALUATORS' NAME
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TEST FACTORS AND ITEMS NO. 1	STANDARD MET	STANDARD NOT MET (Comments)
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TEST FACTORS AND ITEMS NO. 1	STANDARD MET	STANDARD NOT MET (Comments)
DID THE CANDIDATE ?  1 Manipulate the controls safely to determine the fault.  2 Set and regulate the settings and regulators correctly.  3 Determine the intensity and type of faults.  4 Record the faults correctly.		

*Sd/w Bhawani AP*  
*AP*

TASK SPECIFICATION

TASK TITLE : NO 2

REFERENCE NO.: MECH 2.3

1

REPAIRING DEFECTIVE PARTS

JOB TITLE: MECHANICAL FITTER (LEVEL 3)

TASK ELEMENTS

2

- 1 Receives instruction/drawing/component to be repaired.
- 2 Determines methods and sequence of operation for repairing.
- 3 dismantles the required parts/to be repaired.
- 4 Arc weld to repair the damaged part.
- 5 Gas weld to repair the damaged part.
- 5 Brazes to repair the damaged part.
- 6 Machine to repair the damaged part.
- 7 Performs the repair operation (Metal spraying, lapping, honing, scraping)
- 8 Assembles after repairing.

*S. S. S. S.*  
*B. S. S. S.*  
*SP*

TASK SPECIFICATION

TASK PERFORMANCE REQUIREMENTS

- |   |  |    |   |
|---|--|----|---|
| 1 | Steel ruler                            | 8  | Complete <i>Arc welding equipment</i>   |
| 2 | Vernier caliper                        | 9  | Complete Gas welding equipment  |
| 3 | Inside and outside micrometer          | 10 | Machine tools complete with standard accessories (Lathe, drilling, milling, grinding, and shaping). |
| 4 | Feeler gauge                           |    |   |
| 5 | Dial gauge                             |    |   |
| 6 | Screw driver (3,4,5) including Phillip |    |   |
| 7 | Hand tools                             |    |   |

TASK PERFORMANCE STANDARDS

The correct part to be repaired dismantled safely. The part repaired as required either with one or more than one operation like welding, brazing and machining. The component/machinery assembled as required for normal operation.

*Srdw*  
*Brouette*  
*Sp*

## REPAIRING DEFECTIVE PARTS

## TASK SPECIFICATION

TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGIENE
2	1.1	Knowledge about dismantling the equipment common sequence and principle			
	1.2	Knowledge about arc welding and arc weldable materials.			Safety hazards on arc welding, gas welding and brazing
	1.3	Knowledge about gas welding and gas weldable materials.			
	1.4	Brazing and its principle for repairing component			
	1.5	Machining principle on lathe, milling, drilling, grinding and shaping			Hazards involved in machining
	1.6	Knowledge of common practices on assembling			Consequences of wrongly assembled equipment

*Sundar Brankale*  
*SP*

PERFORMANCE TEST (skill assessment)

TITLE: Maintenance Fitter (LEVEL 3)

LOCATION OF TEST

Task No 2

CANDIDATES NAME

EVALUATORS' NAME

TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
<p>DID THE CANDIDATE?</p> <ol style="list-style-type: none"> <li>1 Select appropriate component for repairing.</li> <li>2 Repair the component as specified/required applying the appropriate method (Welding, machining)</li> <li>3 Finish repairing the component within specified time.</li> </ol>		

*Seth Branta*

TASK SPECIFICATION

TASK TITLE : NO 3

FABRICATING REQUIRED MECHANICAL PARTS

JOB TITLE: MECHANICAL FITTER (LEVEL 3)

TASK ELEMENTS

- 1 Receives instruction/drawing/component to be fabricated
- 2 Determines methods and sequence of operation for fabricating.
- 3 Select materials and marks out.
- 4 Measures/tallys the component to the original.
- 5 Forms the component as required using hand forming tools or hydraulic or pneumatic presses with punch and dies.
- 6 Machines the component as required (lathe, milling, grinding (SURFACE AND CYLINDRICAL)).
- 7 Welds the component as required (Arc and Gas).
- 8 Assembles the fabricated component for trial testing.

Sudh Bhau  
AB

TASK SPECIFICATION

PERFORMANCE REQUIREMENTS

- |   |  |    |  |
|---|--|----|--|
| 1 | Steel ruler                                  | 8  | Arc welding equipment complete   |
| 2 | Vernier Caliper                              | 9  | Gas welding equipment components   |
| 3 | Inside and outside micrometer                | 10 | Machine tools (lathe, drilling, milling, grinding and shaping with standard accessories. |
| 4 | Feeler gauge                                 | 11 | Hand forming tools.  |
| 5 | Dial gauge                                   | 12 | Hydraulic and Pnuematic presses with punch and dies.                                     |
| 6 | Screw drivers (3,4,5) and including phillips |    |  |
| 7 | Hand tools                                   |    |  |

PERFORMANCE STANDARDS

The material for component to be fabricated selected as required  
 The fabricated materials should be of specified tolerances or as follows

Tolerance:

Machining	+ <sub>-</sub>	0.1 mm
Marking	+ <sub>-</sub>	0.1 mm
Filing	-	0.5 mm
Screwing	+ <sub>-</sub>	1.0 mm
Chiseling	+ <sub>-</sub>	1.0 mm
Welding	+ <sub>-</sub>	1.0 mm

*Srdh*  
*Bhawan*  
*SP*

PERFORMANCE TEST (skill assessment)

TITLE: Maintenance Fitter (LEVEL- 3)

LOCATION OF TEST

CANDIDATES NAME

Task No 3

EVALUATORS' NAME

TEST FACTORS AND ITEMS

STANDARD MET

STANDARD NOT MET (Comments)

DID THE CANDIDATE?

- 1 Select appropriate material for component fabricating.
- 2 Fabricate the component as specified applying the appropriate method (Welding, machining)
- 3 Finish fabricating the component within specified time.

*S. S. Bhat*  
*Bhat*  
*Sp*

TASK SPECIFICATION

TASK TITLE : NO 4

REFERENCE NO.: MECH 2.1

1 ASSEMBLING, REFITTING, ADJUSTING, REPLACING COMPONENTS OF MACHINE/EQUIP. JOB TITLE: MECHANICAL FITTER (LEVEL 1)

TASK ELEMENTS

- 2
- 1 Receives instructions/drawing/manufactorer's manuals/information for assembling.
  - 2 Determines method and sequence of operation for assembling.
  - 3 Assembles, adjusts or replaces the component as required.
  - 4 Uses measuring instruments/tools to determine the proper alignment.
  - 5 Refixes, readjusts as required.

*Sredh*  
*Brown*  
*AP*

TASK SPECIFICATION

PERFORMANCE REQUIREMENTS

- |   |   |                 |   |                 |
|---|---|-----------------|---|-----------------|
| 1 | 1 | Set of spanners | 8 | Feeler gauge    |
|   | 2 | Hand tools set  | 9 | Lifting devices |
|   | 3 | Drifting pin    |   |                 |
|   | 4 | Vernier caliper |   |                 |
|   | 5 | Micrometers     |   |                 |
|   | 6 | Height gauge    |   |                 |
|   | 7 | Dial gauge      |   |                 |
|   |   |                 |   |                 |
|   |   |                 |   |                 |

PERFORMANCE STANDARDS

- 2
- The component assembled or adjusted should be free of
- 1 damage (while assembling or adjusting)
  - 2 leakage(sealing part)
  - 3 excessive or little backlash.
  - and 4 misalignment.
- The serviceability of machinery restored to specified level

*Handwritten signature*  
*Handwritten initials*

FABRICATING REQUIRED MECHANICAL PARTS

TASK SPECIFICATION

TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGIENE
4	1	Principle of assembling, refitting, adjusting and replacing of component of equipment.			
	2	Use and care of dismantling and assembling tools and equipment.			
	3	Use and care of testing, adjusting and calibrating tools and equipments.			
	4	Knowledge about limits fits and tolerances.		symbols regarding fits.	

*Sanjay Bhatnagar*  
*AB*

PERFORMANCE TEST (skill assessment)

TITLE: MECHANICAL FITTER (LEVEL 3)

LOCATION OF TEST

CANDIDATES NAME

Task number 4

EVALUATORS' NAME

TEST FACTORS AND ITEMS

STANDARD MET

STANDARD NOT MET (Comments)

DID THE CANDIDATE

- 1 Assemble, adjust the component without sealing leakage.
- 2 Assemble, adjust the component without damage or mis alignment.
- 3 Assemble, adjust the component without excessive <sup>1/8" free</sup> backlash.
- 4 Make the equipment to operate on specified service level.
- 5 Reassemble, readjust the component as required.
- 6 Finish the job within specified time.

← note 1

*Sally Bonner AP*  
*AP*  
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TASK SPECIFICATION

TASK TITLE : NO 5

1 INSTALLING MACHINERY / EQUIPMENT.

JOB TITLE: MECHANICAL FITTER (LEVEL 3)

TASK ELEMENTS

- 2
- 1 Receives instruction/drawing for machinery/equipment installation.
  - 2 Determines methods and sequence of operation for installation.
  - 3 Marks <sup>the</sup> and lay out the position of machinery/equipment.
  - 4 Prepares foundation for rigging. ?
  - 5 Transfers, positions, levells, fixes the machinery/equipment.
  - \* 6 Tests and commissions ~~for~~ the machinery/equipment.

Salle P. Brantle  
H

TASK SPECIFICATION

PERFORMANCE REQUIREMENTS

- |   |  |                             |
|---|--|-----------------------------|
| 1 | 1 Measuring tape   | 3 Hand drill power driven   |
|   | 2 Marking and positioning fixtures as required.          | 9 Levels and straight edge. |
|   | 3 Measuring instruments (vernier calipers, micrometers). | 10 Rigging bolts and nuts.  |
|   | 4 Dial gauge.  |                             |
|   | 5 Feeler gauge   |                             |
|   | 6 Hand tools   |                             |
|   | 7 Lifting tackles and slings.                            |                             |

PERFORMANCE STANDARDS

- 2 The position for machinery and equipment marked out as required  
 The foundation prepared as required.  
 The machinery and equipment transferred, positioned, levelled and fixed as specified. The machinery and equipment tested and commissioned to assure the specified performance.

*Soalr*  
*Bravetto*  
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## Installing machinery/equipment.

## Task specification

TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	CALCULATION	GRAPHIC INFORMATION	SAFETY & HYGIENE
3	1	Knowledge of machinery installation (position, level)			
	2	Knowledge of procedure of installation			
	3	Knowledge of layingout, leveling marking and positioning of machinery			
	4	Processes of preparing foundation			
	5	Procedure of testing and commissioning the machines and equipment.			
	6	Knowledge about vibration/reducing vibratio using packings and cushions.			

*Solih Maulana*  
*SP*

PERFORMANCE TEST (skill assessment)

TITLE: MECHANICAL FITTER (LEVEL 3)

LOCATION OF TEST

Task NO 5

CANDIDATES NAME

EVALUATORS' NAME

TEST FACTORS AND ITEMS

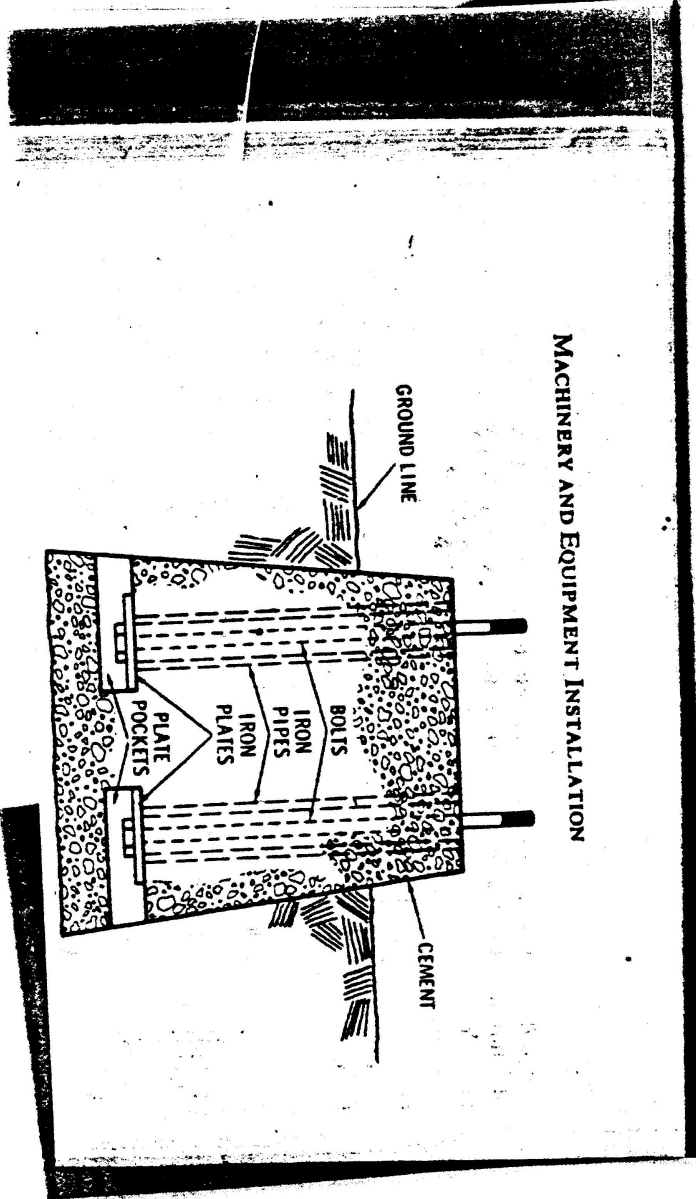
STANDARD MET

STANDARD NOT MET (Comments)

DID THE CANDIDATE

- 1 Markout the position for machinery as specified
- 2 Prepare the foundation as specified
- 3 Position, transfer, or level the equipment as required
- 4 Test the equipment for appropriate functioning

*Sudh*  
*Bhauke*  
*SP*



Solw

Braun