



GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP
DIRECTORATE GENERAL OF TRAINING

COMPETENCY BASED CURRICULUM

SHEET METAL WORKER

(Duration: One Year)

CRAFTSMEN TRAINING SCHEME (CTS)

NSQF LEVEL- 3



SECTOR – CAPITAL GOODS AND MANUFACTURING



Directorate General of Training

SHEET METAL WORKER

(Engineering Trade)

(Revised in 2019)

Version: 1.2

CRAFTSMEN TRAINING SCHEME (CTS)

NSQF LEVEL- 3

Developed By

Ministry of Skill Development and Entrepreneurship
Directorate General of Training
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1. COURSE INFORMATION

During the one-year duration a candidate is trained on subjects Professional Skill, Professional Knowledge, Engineering Drawing, Workshop Science & Calculation and Employability Skills related to job role. In addition to this a candidate is entrusted to make/do project work and Extra Curricular Activities to build up confidence. The practical skills are imparted in simple to complex manner & simultaneously theory subject is taught in the same fashion to apply cognitive knowledge while executing task. The broad components covered under Professional Skill subject are as below:

The practical part starts with selecting sheet of required type, thickness (gauge) and size and marks it with scribe, square, divider, steel rule etc., according to drawing or sample. Other activities conducted at the yearly course are like shearing or bending the sheet as per sketch by machine or hand shear, forming sheet metal to required shape and size by various operations such as shearing, bending, beading, channeling, circle cutting, seaming, forming, riveting etc., performing different type of MS pipe joints by Gas welding (OAW), performing soldering, brazing operations on sheet metal etc. The course also covers performing Arc welding, Gas welding on sheet metals, performing frame work hollowing and raising on non ferrous and ferrous sheets, bending and joining of pipes, preparing utility items with ferrous and non ferrous sheets, performing TIG Welding, MIG Welding, Spot Welding on metal sheets, fabrication work with metal sheets, undertake repair work of mudguard, Radiators etc.

Professional Knowledge subject is simultaneously taught in the same fashion to apply cognitive knowledge while executing task. In addition components like Physical properties of engineering materials, different types of iron, properties and uses, Heat & Temperature are also covered under theory part.

In addition to above components the core skills components viz., Workshop calculation & science, Engineering drawing, employability skills are also covered. These core skills are essential skills which are necessary to perform the job in any given situation.

Learning outcomes are a reflection of total competencies of a trainee and assessment will be carried out as per the assessment criteria.

5.1 LEARNING OUTCOMES (TRADE SPECIFIC)

1. Select sheet of required type, thickness (gauge) and size and mark it with scribe, square, divider, steel rule etc., according to drawing or sample following safety precautions.
2. Shears or bends the sheet wherever necessary by machine or hand shear.
3. Form sheet metal to required shape and size by bending, seaming, forming, riveting etc., using mallets, hammers, formers, sets, stakes, etc., or by various operations such as shearing, bending, beading, channelling, circle cutting.
4. Perform different type of MS pipe joints by Gas welding (OAW).
5. Perform soldering, brazing operations on sheet metal.
6. Perform Arc welding, Gas welding, TIG welding & MIG welding and spot welding on sheet metals.
7. Make sheet metal articles according to drawing or sample following safety precaution.
8. Plan & work in different sheet metals such as tin, copper, brass.
9. Undertake Aluminium frame works.
10. Make ducts, cabins & panels.
11. Undertake repair work of mudguard, Radiators etc.