

## Fundamentals of Welding Day to Day Planning

SL No.	Day No.	Theory Session (90min)	Topics	Practical session (4hr 45 min)	Topics	Remark
1	Day 1	MC, RNB & SS	Inauguration by Dignitaries Introduction- Keepsake CoE, Safety protocols of Center-MC. Setting the context by RNB	Pre training assessment in the training hall 11:30 to 12 pm. Methods of measurement- SS, & JK (Practical). Identification of metal.	Pre training assessment . Measurement Practical (Plate). Spark Test.	Vernier, measure tape, filler gauge, BCG gauge, right angle etc. Metal samples for identification. Equipment to be kept in the training room
2	Day 2	Dr. GH Upadhyay	Introduction to Gas cutting & Grinding - with Safety	SS & JK	Gas Cutting Practice . Grinding practice on plate	Equipment to be kept in the training room for explanation
3	Day 3	RNB & SS	Types of welding - SMAW process, power source & equipment	SS & JK	Practice on Welding Simulator	
4	Day 4	Prof. D K Patel & SS #	Types of welding - MIG & TIG process, power source & equipment	SS & JK	Practice on Welding Simulator	
5	Day 5	SS	Types of Welding Position & Joints. Electrode & filler material	SS & JK	welding Practice on Actual Power Source	
6	Day 6	Dr. Mrunal Chaud	Welding metallurgy. Pre-Heating & Post heating during	SS & JK	Welding Practice on Actual Power Source	Microscope, microstructures of Metal

		hari (+ RNB) #	welding			
7	Day 7	SS & JK	Types of Welding Defects, Causes & Remedy	SS & JK	Welding Practice on Actual Power Source	
8	Day 8	NC + SS	DT, NDT & X-ray film review	SS & JK	Practice DPT	
9	Day 9	MRB & Team	Automation in Welding	GH & SS	Industry Visit to Manufacturing set - up	
10	Day 10	Aga Khan Trust (MC & RNB)	Getting ready for job.	Post-training assessment & review in the training hall 11:30 to 1 pm. Feedback on training - SS & JK	Final Assessment, feedback & Certificate Distribution by Dignitaries	

Total - 15 hr theory

Total - 47 hr 30min. Practical

Total - 62 hr 30min. Training program

MC	Jahid Khan	
RNB	Manan R Bateriwala	
SS	Gulam Hussain	
NC		

## **Bach No: 2018-2019/Keepsake/B14**

**A report about the Short-Term Training Program on “Beginners/Fresher Welding Training Course” at the GTU’s Keepsake Welding research and skill development center at the at L.D College Engineering.**

- **Course Name:** Beginners/Fresher Welding Training Course
- **Trade Name** Fabrication
- **Duration:** 22/03/2018 to 28/03/2018
- **Venue:** Keepsake Welding research and skill development center at the at L.D College Engineering
- **No of participant:** 25

GTU has established Skill Development Center in Welding Sector at L.D College Engineering. To develop such center Keepsake Engineering Consultancy Pvt.Ltd (Industry Partner), CED and GTU (Host Institute) work jointly.

During the 22/03/2018 to 28/03/2018, “**Beginners/Fresher Welding Training Course**” tanning was arranged under the Keepsake Welding Research & Skill Development Centre at the L.D College Engineering.

### **Objective of the Tanning Program:**

During the one-year duration of “Welder (Fabrication & Fitting)” trade, a candidate is trained on Professional Skill, Professional Knowledge, Engineering Drawing, Workshop Science & Calculation and Employability Skill related to job role. In addition to this, a candidate is entrusted to undertake project work, extracurricular activities and on-the-job training to build up confidence.

### **Outcome of the training Program:**

The trainee learns about elementary first aid, firefighting, environment regulation and housekeeping etc. The practical part starts with basic welding work on stainless steel, cast iron, aluminum and brass viz. cutting of pipes, brazing, arc gauging etc. Cutting of MS sheets & plates in different angles as per drawing, related to structural and pressure parts. Joining of pipes of different diameter and angles by gas welding, thread cutting on different types of pipes & fitting accessories and carry out drilling machine operations to steel structures for fabrication of structures. On completion of each welding job the trainees will also evaluate their jobs by visual inspection and identify the defects for further correction/improvement.

They learn to adapt precautionary measures such as preheating; maintaining inter-pass temperature and post weld heat treatment for Welding Alloy steel, Cast Iron etc. The Workshop calculation taught will help them to plan and cut the required jobs economically without wasting the material and also used in estimating the Electrodes, filler metals etc. The Workshop Science taught will help them to understand the materials and properties, effect of alloying elements etc. Engineering Drawing taught will be applied while reading the job drawings and will be useful in understanding the location, type and size of weld to be carried out.