

## 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/B12

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:** 19/02/2018-to 24/02/2018
- **Venue:** Keepsake Welding research and skill development center at the at L.D College Engineering
- **No of participant:** 24

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 19/02/2018-to 24/02/2018, “Beginners/Fresher Welding Training Course” tanning was arranged under the Keepsake Welding Research & Skill Development Centre at the L.D College Engineering.

In this training student will learned basic about the welding like Gas fuses, electric is welding and working of the gas cutter.

Welder, Electric; Arc Welder fuses metals using arc-welding apparatus and electrodes (welding material). Examines parts to be welded, cleans them and sets joints together with clamps or any other suitable device. Starts generator or transformer (welding apparatus and regulates current according to material and thickness of welding. Clamps one lead (insulated wire carrying current from generator) to part to be welded, selects required type of electrode and clamps it to holder connected with other lead). Generates sparks between electrode and joint, simultaneously guiding and depositing melting electrode uniformly for welding.

Takes precautionary measures such as wearing rubber gloves, holding welding screen of dark glass etc. May join parts first at various points for holding at specified angles, shape, form and dimension. Welder, Machine; operates gas or electric welding machine to joint metal parts by fusion. Sets machine for operation by igniting burners and adjusting flames or by switching on current. Regulates flow of gas or current and adjusts machine according to material to be welded.

Checks cooling system and adjusts movement of conveyor, if any. Feeds material to be welded with either one by one or in batch according to type of machine and welds them by pressing paddle, or by automatic arrangements. May use fixtures or other suitable devices for mass production work. Is designated as SPOT WELDER, FLASH WELDER, etc. according to machine and type of work done.

Gas Cutter: Flame Cutter cuts metal to required shape and size by gas flame either manually or by machine. Examines material to be cut and marks it according to instruction of specification. Mounts template and sets machine to cut to specifications. Makes necessary connections and fits required size of nozzle or burner in welding torch. Releases and regulates flow of gas in nozzle or burner, ignites and adjusts flame. Guides flame by hand or machine along cutting line at required speed and cuts metal to required size. May use oxyacetylene or any other appropriate gas flame.