

## Welding Job Safety

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### ABSTRACT

*Welding is important process used to join two or more metal pieces. In welding several risk associated in which one is concern with safety. Inadequate safety measure always results accident in term of Fatality or injury or fire. This study is carried out to find gaps during welding job that results harm. In this study risk related to welding job & Safety measure that require has been included. This study is helpful to control risk related to welding job and ensure safety of people.*

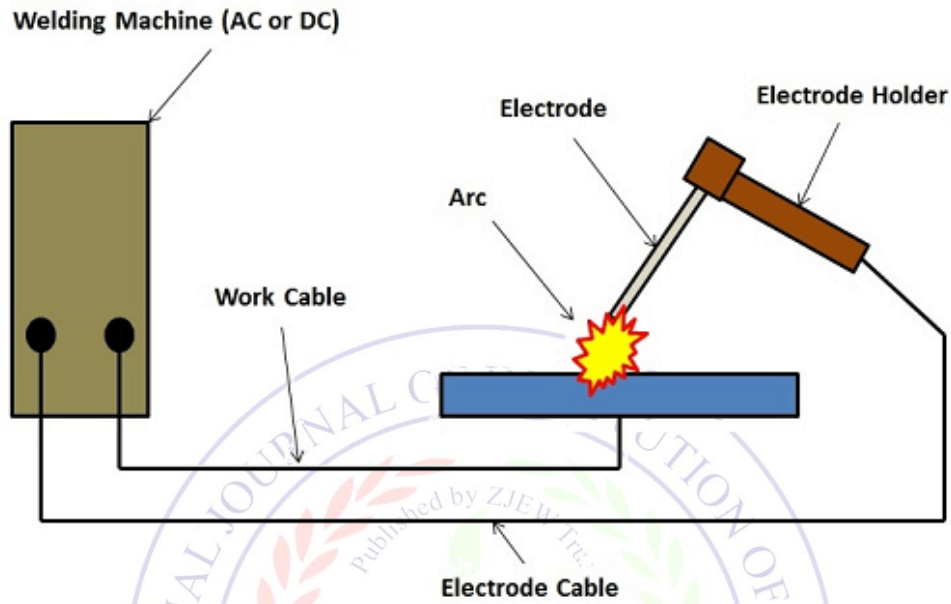
**Keyword:** Welding Job Safety, Risk Control, Electric shock prevention, Safety

### OBJECTIVE:

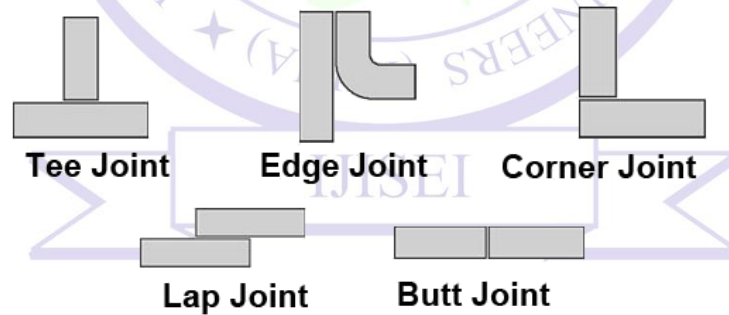
Objective To write & Publish this paper is to know Risk associated with welding Job and control up to tolerable level to avoid any accident, increase employee morale, increase profitability & organization performance in market.

### 1. INTRODUCTION

Welding is important process use in any organization to join two or more metal pieces or materials. Several factor need to consider for effective welding & complete Task. Safety related risk is also a factor that always require. In simple welding is defined as Joining two or more pieces of metal together by softening with heat and applying pressure. Spot welding, metal inert gas (MIG), Tungsten inert gas, gas metal arc welding, arc welding, and gas welding are few example of welding. Risk varies as per nature of welding job. Different Joints applied as per application (Fig.3). Defective welding cable, Poor earthing, Inadequate use of PPE's welding job near flammable material are few exam of potential sources of harm.



**Fig. 1) Welding Process**



**Fig. 2 Types of welding joint**

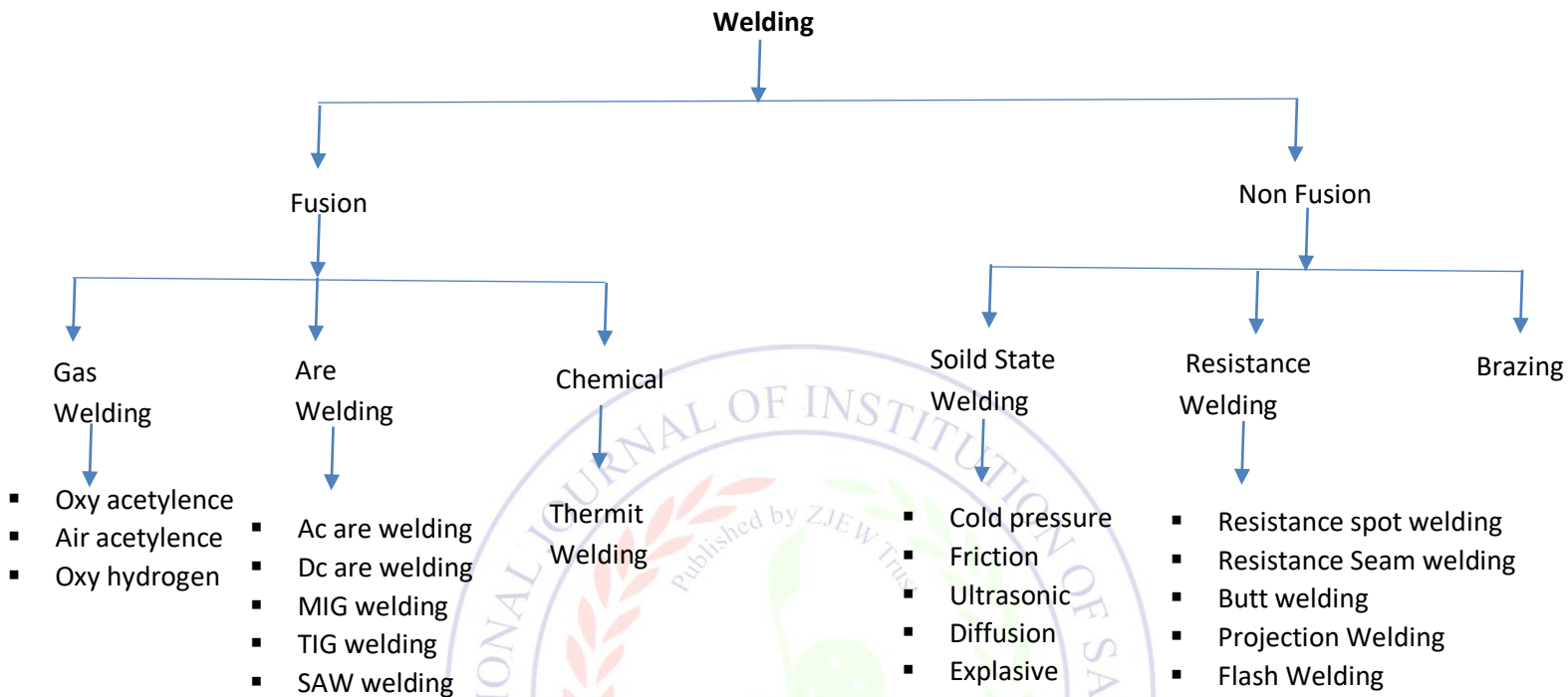


Fig. 3 Types of welding process

### 3. Hazard & Risk control

In welding job hazard varies activities to activities, location where work is running. Hazard means such potential sources that results accident.

#### 3.1 Hazard associated with welding Job:

- **Electrocution**, Person may sustain electrical shock due to defective welding cable, electrode holder & in wet condition.
- **Fire & explosion**, Leakage in cutting set, Gas cutting job near Flammable material, Non return valve not used in cutting set, Gas cylinder kept in direct sunlight area or near ignition sources, Gas cylinder used as roller for shifting from one place to other or welding job near flammable material.

- **UV radiation exposure:** Emission of radiation during welding job.
- **Fumes & Gases:** Exposure and inhalation of fumes & gases that emit during welding job.
- **Sparking:** it may cause burn injury or fire.
- **Fall:** Person may fall during working at height when sustained electrical shock



**Fig. 4, Welding**

### 3.2 Safety Control measure:

- Power routed through ELCB of 30 mA sensitivity or below.
- No welding activity in wet condition.
- Replaced all welding lead spliced within 10 feet of holder.
- Work piece shall be clamped not hold with hand.
- Ensure suitable body earthing.
- Avoid loose connection & joints.
- Welding cable, Holder in good working condition
- Avoid welding job near Flammable/combustible material.
- Use Fire retardant cloth for preventing welding spatter falling.
- Wear suitable PPEs like Apron, welding shield, leather glove.

- Always take adequate measure as per Job
- In case gas welding, Keep gas cylinder in upright position, secure to cylinder, Check leak before starting job, Ensure NRV, Protect to gas cylinder from Direct sunlight or heat sources.

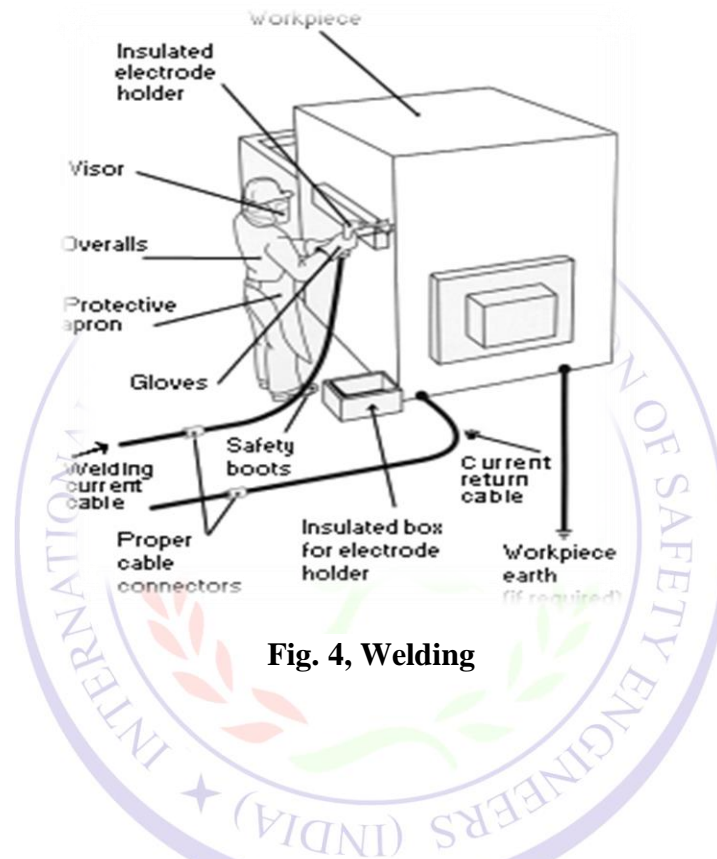


Fig. 4, Welding

## 4. Conclusion

Welding is important process that uses every where. Industries are main origin where welding job has been used. Welding has variety of application. Several risk are associated with welding job and this results accident if not take adequate measure. Electrocutation, Fire, Burn injury, smoke & Some emission, UV radiation are few types of hazard associated with welding job. Such Hazard can be control to take needful action. Always use standard and suitable welding machine and its associated equipments, Ensure body earthing, use suitable personnel Protective equipment, workers must be trained, avoid welding job near flammable material, power routed through ELCB of 30mA or less for welding machine and other applicable safety measure must be ensure.

## References:

No any reference