**Work instruction for Gas cutting**

Objective Safe Gas cutting procedure

Scope Boiler, Turbine and other Plant areas

Responsibility  Engineer in charge and workmen at job

PPEs Helmet, Safety shoes, Hand gloves, Dust mask, and Safety

goggles.

Aspect – Impact

Scrap generation Resource Depletion

Gas leakage Air pollution

Hazards Identified

Mechanical Hazard Trapping

Physical hazard Noise, Heat

Human behavior Loose connection, Non use of PPEs, Alcoholism

PRECHECKS

Leakages from cylinder.

Condition of cutting hose pipe for any cuts and its connections for any damage.

Condition of cutting torch, flashback arrestors and end connections.

Condition of double stage regulators, flash back arrestors and end connections.

Cylinder trolley should be certified and checked for its fitness before use.

**Lost time injury Incident Note** - On Apr-2018 Mr. Anil Gas cutter of M/s Janson Engineering contractor workmen met an accident while shifting cylinder trolley with cylinder. Total four workmen allotted for shifting cylinder trolley, while during shifting due to lack of internal communication Mr. Anil trying to pull trolley alone by hardly and get twisted and her leg get fractured. This workman sends him to outside for treatment.

PROCEDURE

Shift the cylinder properly in required space, kept vertical and tied with support.

Shifting of cylinder from one location to other should be done by using cylinder trolley or proper vehicle.

Cylinder trolley to be inspected for freeness of wheel, brake effectiveness and locking arrangement for cylinder with chain.

Shifting of cylinder by trolley should not be done by less than 3 worker, In case of bad road surface minimum 4 person is must.

Connect the regulators and hose pipe to the cylinder with proper tightening and clamping.

Open one by one oxygen and DA cylinder key slowly and check the leakages from end connections.

Slowly open one by one oxygen and DA the cutting torch nozzle valve and adjust flow regulator as required.

Once gas flow path clear from cylinder to torch up to nozzle check any leakages.

Wear the safety hand gloves and goggles before using lighter for start.

Before starting the cutting torch ensure the surrounding area to be clear, free form explosions and make the availability of fire extinguisher.

After completion of cutting work close both cutting torch nozzle valve and release the regulator flow valve and close the cylinder key.

Remove all the connection of regulator, cutting hoses and hose to be rolled properly.

Clean and shift the all material cutting torch with hose, regulators, lighter, cylinder key, safety goggles, and hand gloves in to proper designated place in work shop.

If cylinder becomes empty shifted in to stores.