**Experiment No. 10**

## Statement:

Making flaring of rigid pipes / tubes

## Desired Learning Objectives

2. At the end of this practical, the trainees will be able to understand the use of rigid pipes flaring. After going through the practical, trainees would be able to understand the leak free matching of pipes and union joints.

(a) Understand the use of flaring metal to metal connection / joints.

(b) Use of flaring tool

(c) Use of bench wise and small hand tools.

(d) Practice machining techniques on metal .

(e) Flushing of pipes for burs / dirt etc.

## Equipment / Material Required

3. Required apparatus are: -

(a) Aircraft rigid pipes 8 mm diameter

(b) Rexene sleeve

(c) Bench vice

(d) Flaring tool

(e) Hacksaw / Tube cutter

(f) Emery paper

(g) Files

(h) De- burr tool

(i) Blanking material (polythene or cloth)

(j) Compressor for air blowing

## Safety Precautions

4. Following safety precautions are to be taken during conduct of practical:

(a) Always refer technical manual to select diameter, material and length.

(b) Secure the pipes with flaring tool and hold in a bench vice.

(c) Insure making proper flaring angle and cleaning of flaring area.

(d) Blow with compressed air for purging of any residual or FOD.

(e) Use of Rexene sleeves to avoid pipes chaffing.

(f) Apply Blanking at the end of pipes.

## Procedure

5. Select the tube in accordance with part number and TO Reference.

(a) Cut the exact length of pipe squarely with hacksaw blade (32 teeth per inch) or tube cutter.

(b) Smooth the metal edges of pipe after cutting with use of file.

(c) Use emery paper & de-bur tool be used to further smooth the internal end of tube and also clean with cloth.

(d) Insert Rexene sleeve on tube to avoid pipes chaffing.

(e) Now insert the tube in accordance with diameter in the spreader of flaring tool in a manner that end of tube be protruded out approximately 2 ~3mm. Place a drop of oil on spreader for lubrication.

(f) Tight the tube firmly in the flaring tool dies with the help of wing nut.

(g) Hold the spreader side of flare tool in a bench vice.

(h) Insert the cone of flare tool into inner Día of pipe by rotating Yoke screw in clockwise direction. Once cone get seated inside the pipe, rotate Yoke screw in anticlockwise direction. Repeat the same procedure (2 ~3 times) until desire flaring of pipe is made.

(j) Remove the cone of flare tool afterward remove the spreader from bench vice.

(k) Carry out air blowing of pipe with help of pneumatic pressure.

(l) Apply blanking at the flared ends of tube.

**Conclusion:**