FEATURES
1.
2.
3.
4.
5.

Less Expensive
Lighter in weight
Good surface finish
Requires lesser force of deformation
Can eas...

MATERIAL USED
Black Iron:
Cheapest sheet metal
Bluish black appearance
Often referred to as uncoated sheet
Corrodes rapidl...

MATERIAL USED
Galvenised Iron:
it is a Zn coated iron
Popularly known as GI Sheets
Zn coating :
resist rusting,
improves t...MATERIAL USED
Stainless Steel:
it is an alloy of steel with
chromium(min.10-12%), nickel
and some other materials.
Good co...MATERIAL USED
Copper:
Available either as cold rolled or hot
rolled sheets
Better appearance than other
metals
Good corros...MATERIAL USED
Aluminium:
Can not be used in pure form,
but is used with a very small
amount of Cu, Si, Mn and Fe.
Whitish ...MATERIAL USED
Tin Plates:
is a thin sheet of iron coated
with tin to prevent rusting
Very bright silvery appearance
Use in...

MATERIAL USED
Lead:
Worked by hand without
using any mechanical
device
Very soft and heavy
Use in nuclear shielding,
highl...SHEET METAL HAND TOOLS
1. Measuring tools
i. Steel rule
ii. Folding rule
iii.Circumference
rule
iv. Vernier
Caliper
v. Mic...1. MEASURING TOOLS
i.

Steel Rule: It is made of hardened
steel and used for taking linear
measurements of articles to an
...1. MEASURING TOOLS
v. Vernier Caliper: used for
measuring both inside and
outside dimensions upto 0.02
mm.
vi. Micrometer ...SHEET METAL HAND TOOLS
2. Straight Edge: is a flat
graduated steel bar with one
longitudinal edge bevelled. It
is useful f...

SHEET METAL HAND TOOLS
Scriber: also known as metal
worker’s pencil. It has one
hardened sharp pointed edge
to scratch lin...SHEET METAL HAND TOOLS
Punch: used for marking out
work, locating centers etc.
Prick punches is used to make
small marks o...SHEET METAL HAND TOOLS
8.

Chisel: used for
cutting sheets, rivets,
bolts and chipping
operations. The flat
chisel and rou...SHEET METAL HAND TOOLS
9. Hammers: used for forming
shapes by raising, stretching
or throwing off.
Types:
1. Riveting hamm...SHEET METAL HAND TOOLS
9a. Mallet: used to strike a light
and soft blow on metal.
-this is soft hammer made of
rubber, cop...SHEET METAL HAND TOOLS
12. Pliers: used for holding,
bending and cutting work.
Plires

13. Hand Groover: used for grooves
...SHEET METAL OPERATIONS
1.
2.
3.
4.

Shearing
Bending
Drawing
Squeezing

 SHEET METAL OPERATIONS
1. Shearing: it has three
basic stagesA. Plastic Deformation
B. Fracture
C. Shear
This procedure gi...1. SHEARING
C. Blanking:
It is an operation of cutting a flat
shape from a sheet metal. The
part punched out is called the...1. SHEARING
E. Notching: removing the

E

metal from the edge of
sheet metal.

F. Slitting: In this shearing
is conducted ...2. BENDING
Bending is the creation of a
formed feature by angular
displacement of a sheet metal
work piece.
In this operat...3. DRAWING
It is the operation of
producing
cup
shaped
products from flat metal
sheet.
It is divided into two parts:
1. De...4. SQUEEZING
In this operation, the metal is squeezed within
the cavity of the die and the punch to attain the
desired sha...SHEET METAL JOINTS
1.Hem:
“A hem is an edge or border
made by folding.”
Hems are commonly used
to reinforce an edge, hide
...SHEET METAL JOINTS
2. Seams:
“A seam joins the edges
of two materials.”
Seams are commonly
used in the food
industry on ca...SHEET METAL JOINTS
Types of Seam:
A. Lap Seam: it can prepare
as lap joint by means of
soldering
B. Grooved Seam: made by
...SHEET METAL JOINTS
D. Double Seam: it is like
single seam except that
it formed edge is bent
upward against the
body.
E. D...