STAINLESS STEEL FABRICATION

DESIGNING

CONCEPT   FABRICATION   ANALYSIS
FABRICATION CHARACTERISTIC OF STAINLESS STEEL
FABRICATION CLASSIFICATION AS PER MATERIAL FORMS

SHEET METAL

STRUCTURAL

TUBULAR
Sheet Metal & Tubular Fabrication

- Cutting
- Forming
- Welding
- Pickling & Passivation
- Finishing
CUTTING

- SHEARING
- LASER
- ABRASIVE
- WATER JET

- PLASMA
- SAWs

PUNCHING

- TURRET
- POWER PRESS.
Shearing

- Hydraulic
- Rake Angle
Punching

Turret

Power Press
Laser

- Fiber
- CO2
SHEET METAL LASER CUTTING
5 AXIS LASER CUTTING
TUBE LASER CUTTING
WATER JET

PROCESS

ADVANTAGE
PLASMA IS FOURTH STATE OF MATTER- IONISED GAS WHICH CONDUCTS ELECTRICITY. PLASMA IS CREATED BY ADDING ENERGY TO THE ELECTRICALLY NEUTRAL GAS.
<table>
<thead>
<tr>
<th></th>
<th>LASER</th>
<th>PLASMA</th>
<th>WATERJET</th>
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<tbody>
<tr>
<td>KERF</td>
<td>0.15, 0.05, 0.12 MM</td>
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<td>PRECISION</td>
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<td>MATERIAL</td>
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<td>THICKNESS</td>
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Abrasive Cutting

- Abrasive Cut-off wheel
- Thin abrasive wheel
Forming

- Sheet Bending - Press Brake
- Deep Drawing - Hydraulic Press
- Power Press – Embossing / Drawing
- Rolling Machine
FORMING

• FORCES DURING BENDING
• NEUTRAL AXIS
• FLAT LENGTH CALCULATION - @ Pi D/360
• BEND RADIUS AND NEUTRAL AXIS < 2X AND >2X
• GOOD WAY & BAD WAY BEND
• COLD ROLLED SHEET 1.5 mm- 1R
  1.5 -3mm -1.5-2.5 R
• SPRING BACK – ELASTICITY – THIN & LARGE BEND
Machining

Lathe

Drilling and Tapping

Milling

Automats

Surface Grinding
MILLING

5 AXIS MILLING

VERTICAL MILLING
LATHE

TURNING CENTER

VERTICAL LATHE
SURFACE GRINDING
Welding

- Tungsten Inert Gas Welding
- Capacitor Discharge Welding
- Laser
Welding

➢ Tungsten Inert Gas Welding

WEIGHT
SPATTER
GAS
HF
PULSE
ULTRAVIOLET RADIATION
AUTOMATION
TUNGSTEN PROFILE
Capacitor Discharge Welding

APPLICATION
CAPACITOR
CURRENT
W ELD TIME
STUD /NUTS

ADVATAGE
DISSIMILAR METALS
HOLES
HIDES JOINARIES
PRE FINISHED SHEETS
PIPE BENDING

- CLR
- Material Hardness
- Tolerance
- Dies
PIPE BENDING

- DOUBLE ROLLER
- RESIN & DOUBLE ROLLER
- TRIPLE ROLLER
- MANDREL
THANK YOU