

STAINLESS STEEL FABRICATION

DESIGNING

PLANNING

MANUFACTURING

STAINLESS STEEL FABRICATION

DESIGNING

CONCEPT

FABRICATION

ANALYSIS

FABRICATION CHARACTERSTIC OF STAINLESS STEEL

FABRICATION CLASSIFICATION AS PER MATERIAL FORMS

SHEET METAL

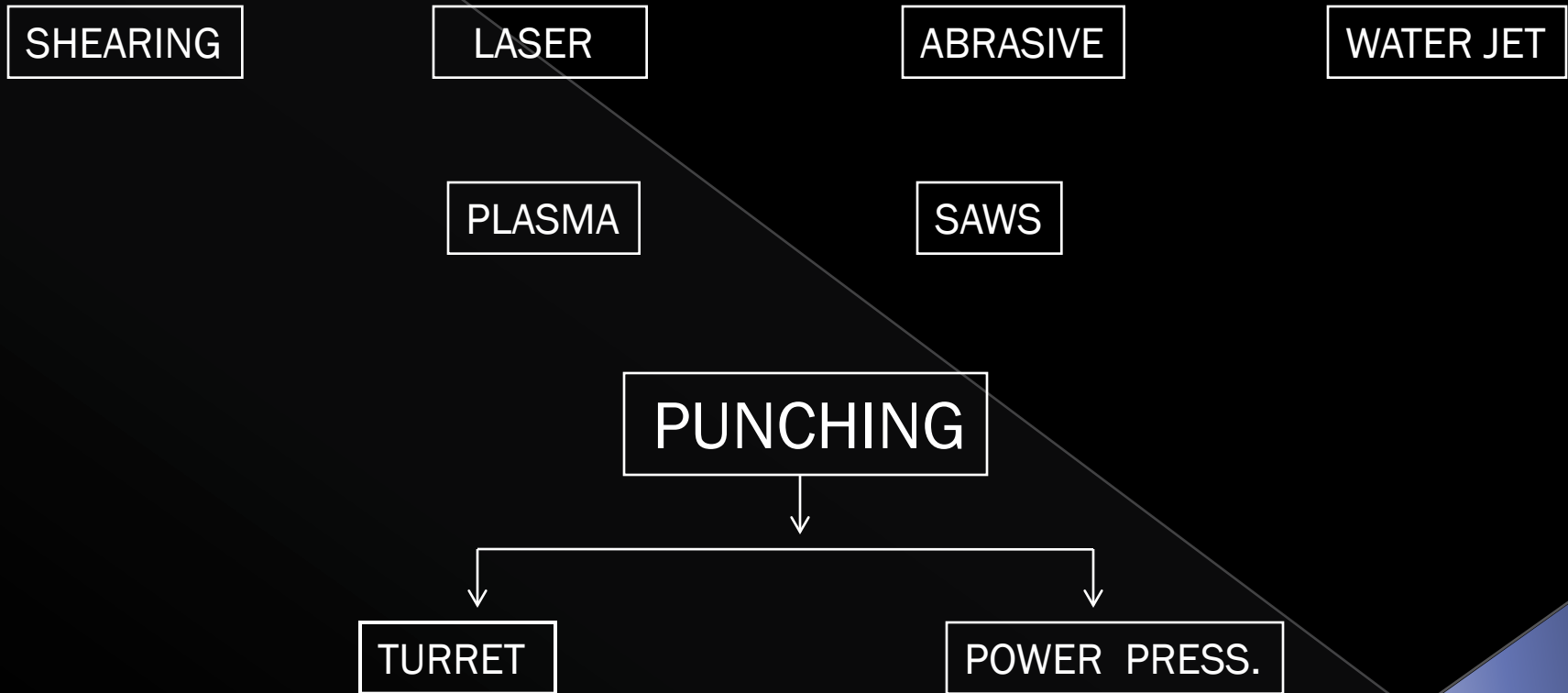
TUBULAR

STRUCTURAL

Sheet Metal & Tubular Fabrication

- CUTTING
- FORMING
- WELDING
- PICKLING & PASSIVATION
- FINISHING

CUTTING



Shearing

➤ Hydraulic

➤ Rake Angle

Punching

Turret

Power Press



Laser

➤ Fiber

➤ CO₂

SHEET METAL LASER CUTTING



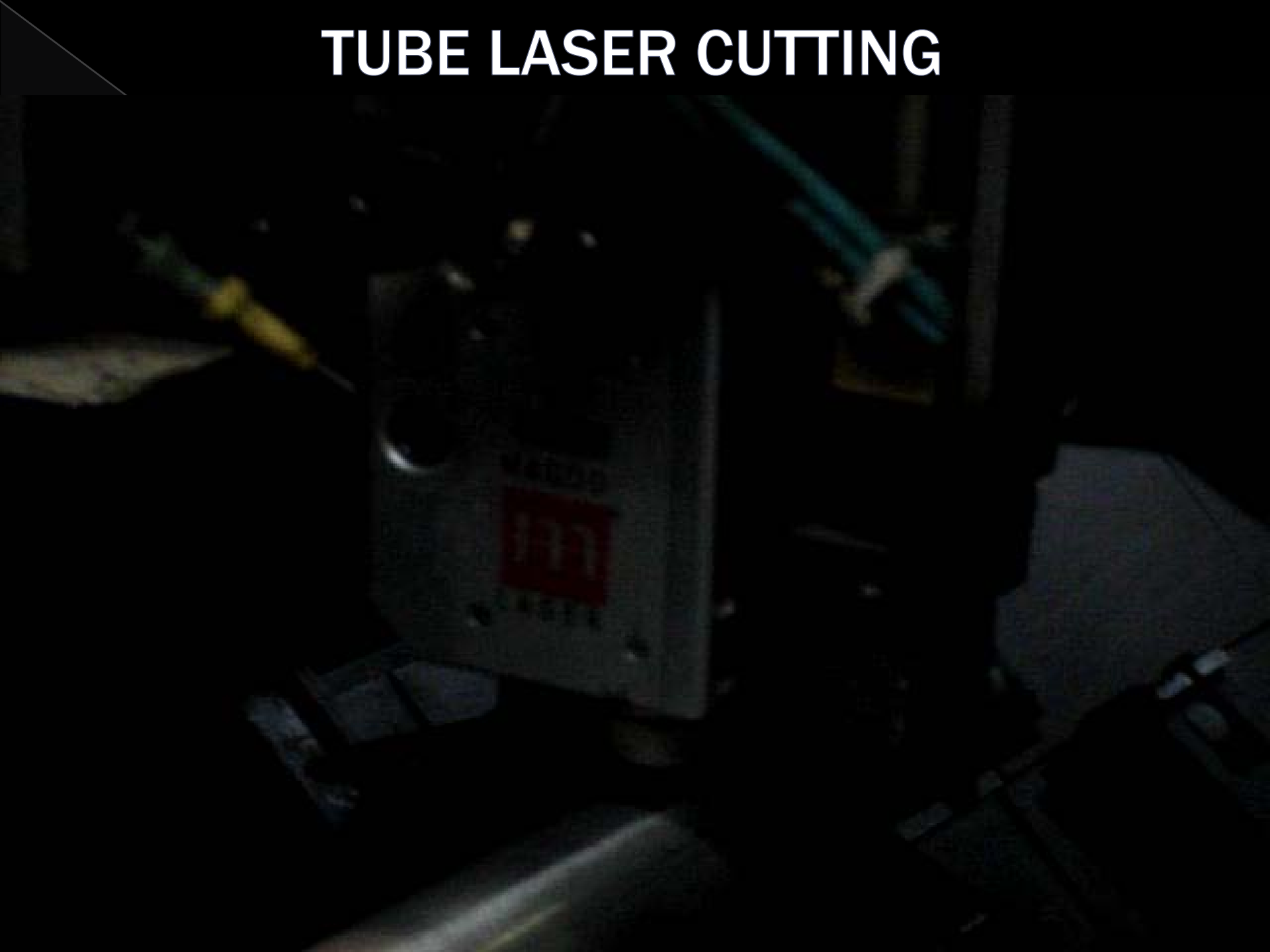
5 AXIS LASER CUTTING



5 AXIS LASER CUTTING

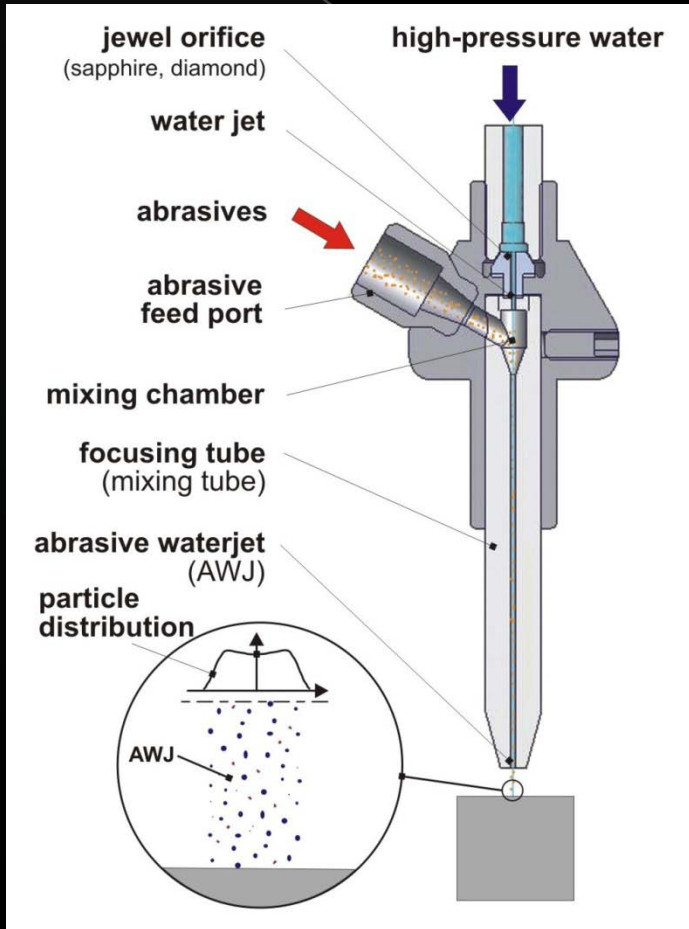


TUBE LASER CUTTING



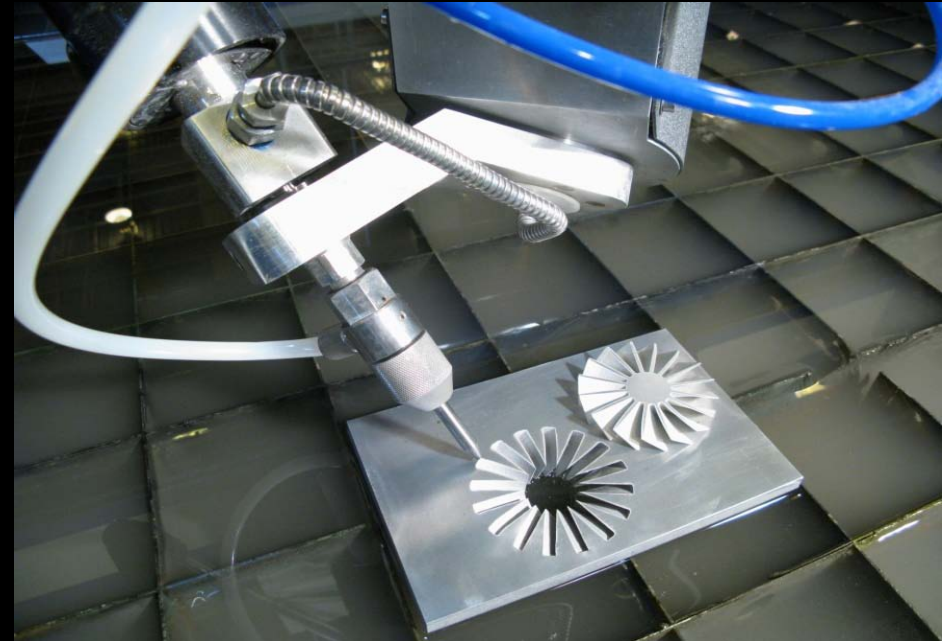
WATER JET

PROCESS



ADVANTAGE

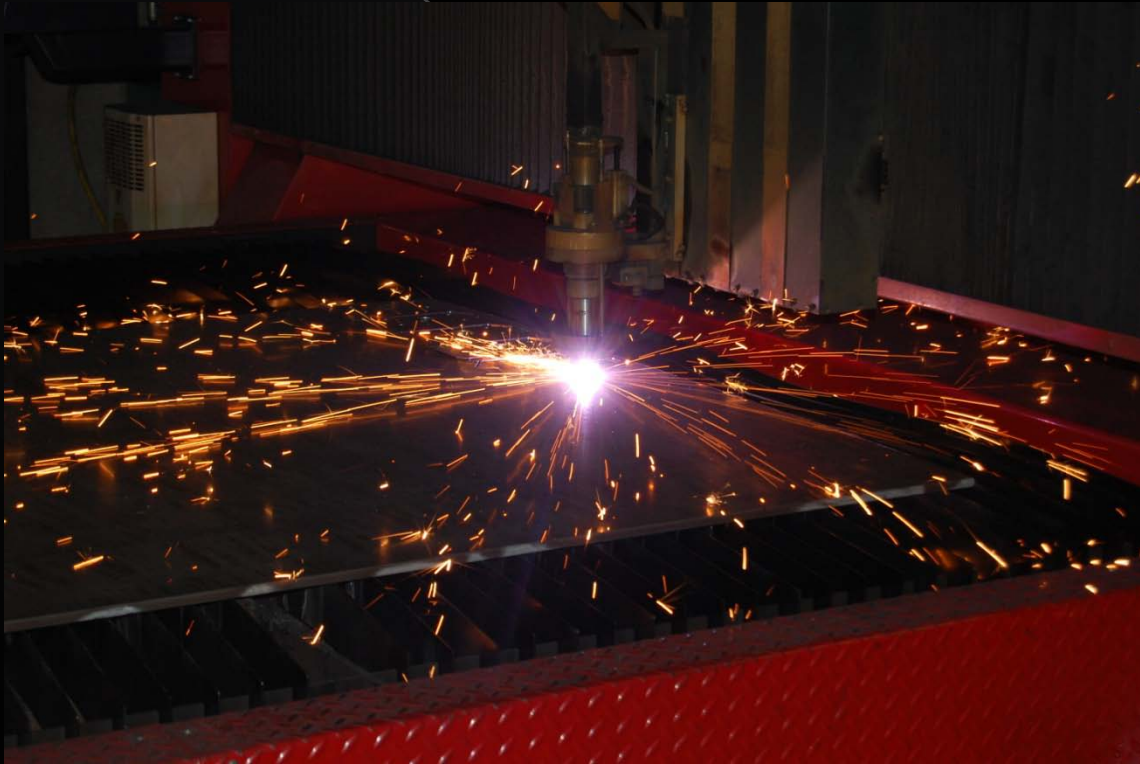
5 AXIS WATER JET



SHEET METAL WATER JET



PLASMA CUTTING



PLASMA IS FOURTH STATE OF MATTER- IONISED GAS WHICH CONDUCTS ELECYRICITY. PLASMA IS CREATED BY ADDING ENERGY TO THE ELECTRICALLY NEUTRAL GAS.

COMPARISON

LASER

PLASMA

WATERJET

KERF-0.15,.05,0.12 MM

PRECISION

MATERIAL

THICKNESS

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

Automats

Drilling and
Tapping

Milling

Surface
Grinding

MILLING

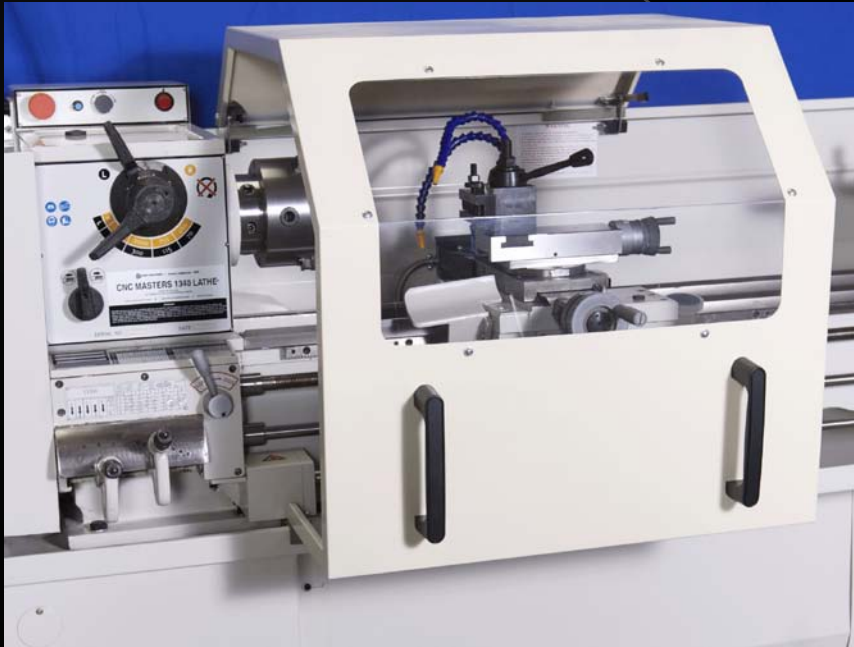
5 AXIS MILLING



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



LASER WELDING



Capacitor Discharge Welding

APPLICATION

CAPACITOR

CURRENT

WELD TIME

STUD /NUTS

ADVATAGE

DISSIMILAR METALS

HOLES

HIDES JOINARIES

PRE FINISHED SHEETS



DEBURRING & CLEANING

WIRE BRUSH



NON WOVEN WHEELS



Finishing

Grinding

Sanding

Polishing

PIPE BENDING



➤ CLR

➤ Material Hardness

➤ Tolerance

➤ Dies

PIPE BENDING

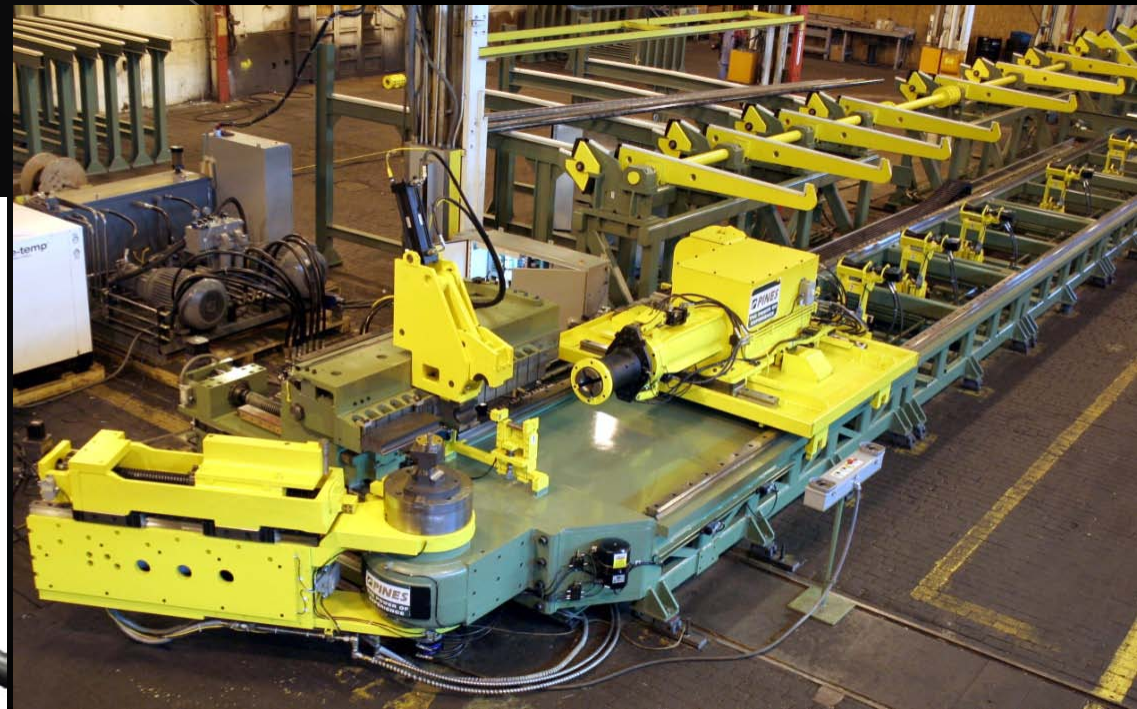
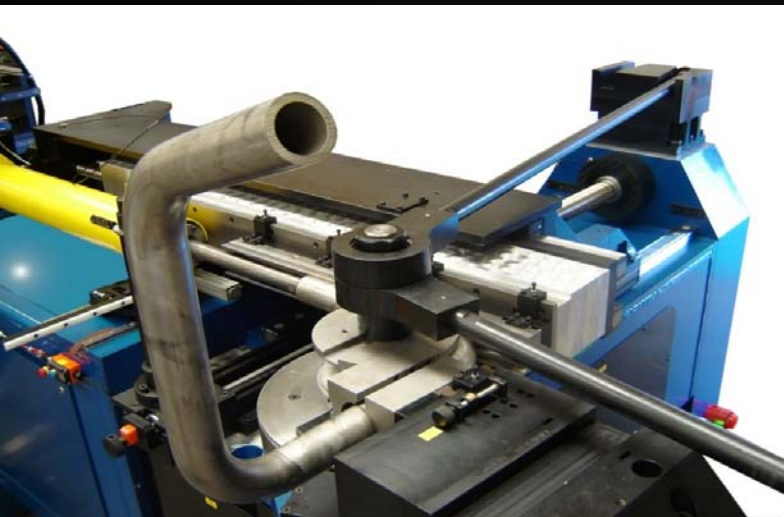


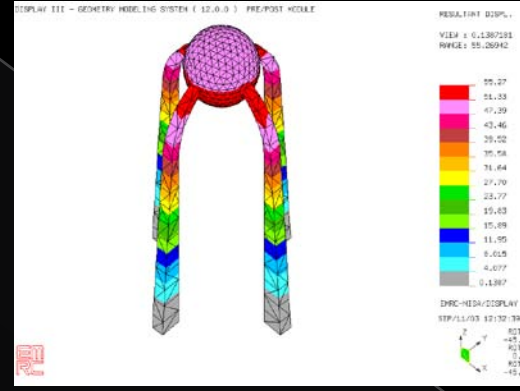
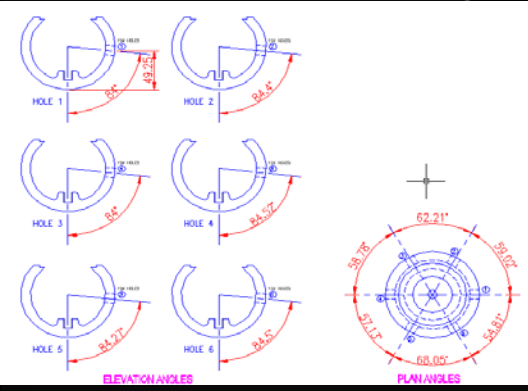
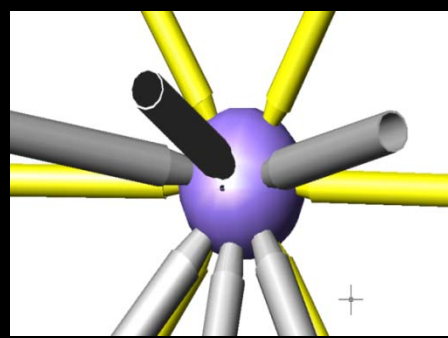
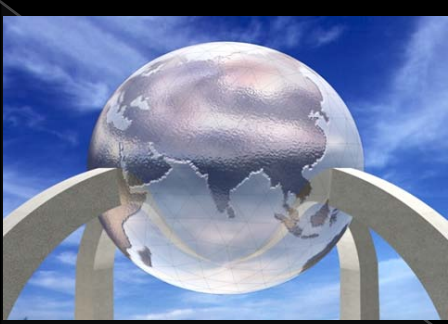
- DOUBLE ROLLER
- RESIN & DOUBLE ROLLER



- TRIPLE ROLLER

- MANDREL





THANK YOU