The TNG Energy Services, Inc, (TNG) Machine Shop is 6,250 sq feet and includes fourteen different automated and manual machines capable of machining nearly any kind of valve, wellhead or ancillary completion components for the geothermal industry.

Through a combination of tried and true conventional machine tools and modern CNC machinery, TNG is able to perform a wide variety of work that suits our manufacturing niche. Whether it is using a manual engine lathe, vertical turret lathe, or horizontal boring mill to recondition a few critical surfaces on large equipment or producing high precision, brand new components from raw billets, forgings, or castings, TNG can do it all.

Many companies have lost sight of the importance of leveraging both old and new technology. TNG is able to use manual machines for operations that would not be cost effective to run on a CNC machine, while reserving our CNC capacity for more precise and higher quantity demands.

The following technical specifications highlight our core machine shop capabilities:

Hwacheon, Vesta 1050B, CNC Vertical Machinging Center

SPECIFICATIONS:

- FANUC Oi control
- 20 HP
- 24 tool capacity
- Travels: X (41") Y (23.5") Z (23.5"),
- CAT 50 x 2.750" spindle with through-the-spinde coolant

Used for manufacturing small to medium sized valve, wellhead, and equipment components with accuracy, repeatability, and superior surface finishes.

SMTCL, Hollow Spindle CNC Lathe

SPECIFICATIONS:

- FANUC Oi control
- 40 HP
- Max swing: 36"
- Max turning length: 315"Spindle bore diameter: 14"

Used for manufacturing large and heavy valve, wellhead, and equipment components with accuracy, repeatability, and superior surface finishes.





LeBlond, Manual Engine Lathe

SPECIFICATIONS:

• Max swing: 18"

• Max turning length: 55"

Used primarily for recondition work on reclaimed valve and wellhead components and also for prepping work pieces for Inconel and stainless weld overlay.



Monarch, Manual Engine Lathe (x2)

SPECIFICATIONS:

• Max swing: 26"

• Max turning length: 55"

• Second Machine: Max swing: 28"

• Second Machine: Max turning length: 84"

Used primarily for recondition work on reclaimed valve and wellhead components and also for prepping work pieces for Inconel and stainless weld overlay.



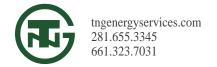
Bullard, Manual Vertical Turret Lathe (x2)

SPECIFICATIONS:

- 34" Chuck
- 36" column travel
- Second Machine: Max 50" Chuck, 56" column travel

Used for machining large valve bodies and wellhead components.





Hwacheon, Hi-Tech 450A YMC, 4 axis CNC Lathe

SPECIFICATIONS:

- FANUC Oi control
- 25 HP main spindle
- 3 HP live tooling motor
- Spindle bore diameter: 3"
- Max swing: 27.5"
- Max turning length: 30"

Used for manufacturing small to medium sized valve, wellhead, and equipment components with accuracy, repeatability, and superior surface finishes.



Shibaura, BZ-8, Manual Horizontal Boring Mill

SPECIFICATIONS:

• Travels: X (31") Y (24") Z (24") W (28")

Used primarily for recondition work on reclaimed valve and wellhead components and also for prepping work pieces for Inconel and stainless weld overlay.



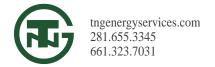
Giddings & Lewis, CNC 6 axis Horizontal Boring Mill

SPECIFICATIONS:

- FANUC Oi-MD control
- 25 HP
- 60 tool capacity
- 5" spindle diameter
- Travels: X (72") Y (72") Z (36") W (39")
- 36" programmable rotary indexing table
- Machine capacity: 30,000 lbs.

Used for manufacturing large and heavy valve, wellhead, and equipment components with accuracy, repeatability, and superior surface finishes.





Kearney & Trecker, 205SA, Manual Knee Mill

SPECIFICATIONS:

- 50" X 12" bed
- Twin spindle with R8 vertical spindle
- NMTB 50 horizontal spindle
- Right angle attachment

Used to support machining operations within the company.



South Bend, Bench Lathe

SPECIFICATIONS:

• 13" swing over apron X 33" between centers

Used to support machining operations within the company.



Carlton, Radial Arm Drill Press

SPECIFICATIONS:

- 3' arm travel
- 9" diameter column

Used to support machining operations within the company.



