Green Tube
High quality 4100 series seamless chrome moly steel

Cut to Length
Each piece is cut to precision lengths for the forging process

Heat for Forging
Tube body ends are heated prior to forging

Forge
Upsets are created on the tube ends by forcing the heated steel into precision dies. The upset's increase in mass is what gives the inertia weld it's strength.

Heat Treat and Quench
After forging, all tube bodies are heat treated, quenched, and normalized in a six step process that results in S135 hardened steel. The best for resiliency, strength, and fatigue resistance.

“Turn and Face”
Tube bodies are turned in a CNC to machine so Outside Diameter and weld-ends are precision matched to their tool joints.

“Zinc Phosphate Coating
4137 heat treated bar stock alloy steel

Milling:
Bar stock sections are sent through a CNC where the tool joint's shape is created. The weld neck, through-hole, taper, and OD dimensions are precision machined and inspected for conformity at every step. Small sections of bar stock can be made with tighter tolerances than can be achieved with a one-piece forged drill rod.

Heat Treat:
Tool joints are heat treated to S135 grade for the best in fatigue resistance and tool toughness.

Threading:
Each tool joint is threaded to exacting standards, and then measured against a Ring & Plug and a JSS gauge to ensure each piece is perfect.

Zinc Phosphate Coating
Each tool joint is Phosphate coated to protect against corrosion and reduce galling on the threads.

Before the pipe is painted, a final inspection of Angular & Parallel alignment is conducted, along with a Wet Mag Particle Inspection.

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