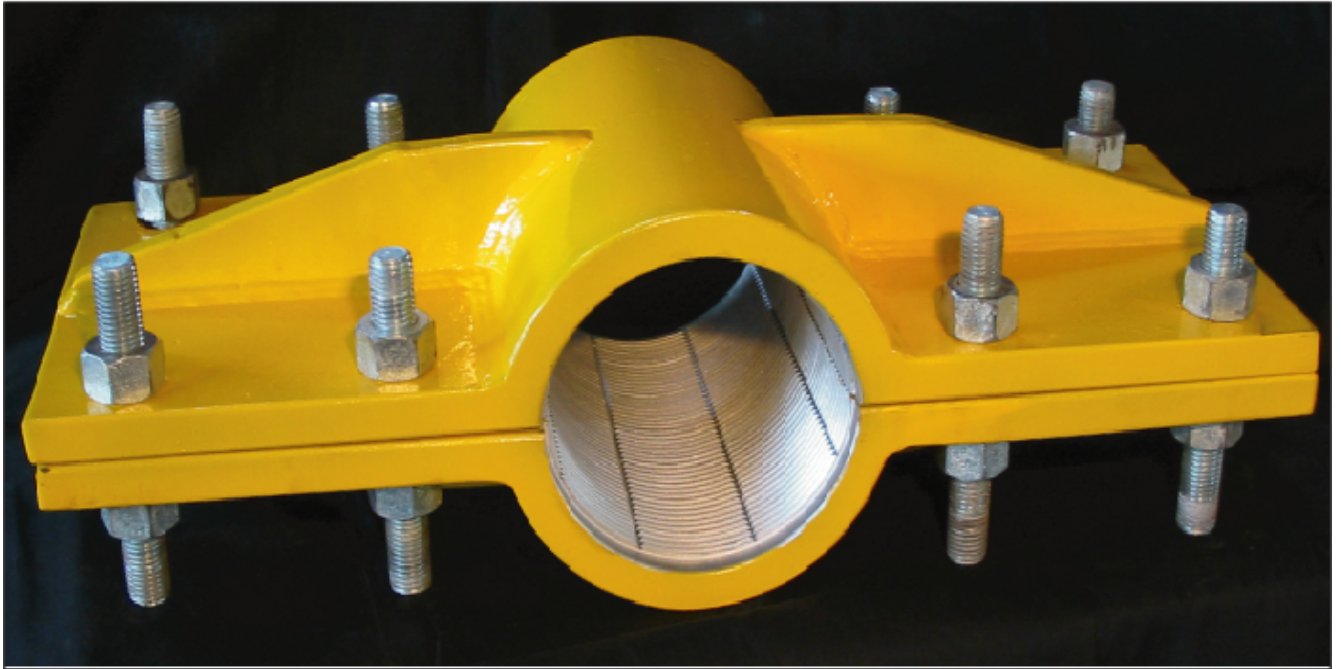


GNY CASING CLAMPS FOR DRILLING OPERATIONS



GNY EQUIPMENT, LLC

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GNY Equipment, LLC

The Company was an early pioneer in the development of hydrant type aircraft refueling equipment and related aircraft ground support equipment. Experience in this field led to the designing and manufacturing of pits required for the early hydrant systems. The company had traded under the name Garsite TSR. The Deer Park facility remained in New York as Garsite International until in December 1995, when GNY Equipment, LLC (GNY) was spun-off to an independent status, bringing with it, almost a half-century of experience in aviation fueling, in liquid, Air, Oil and Gas equipment. The people at GNY have been manufacturing fueling equipment for over three decades.

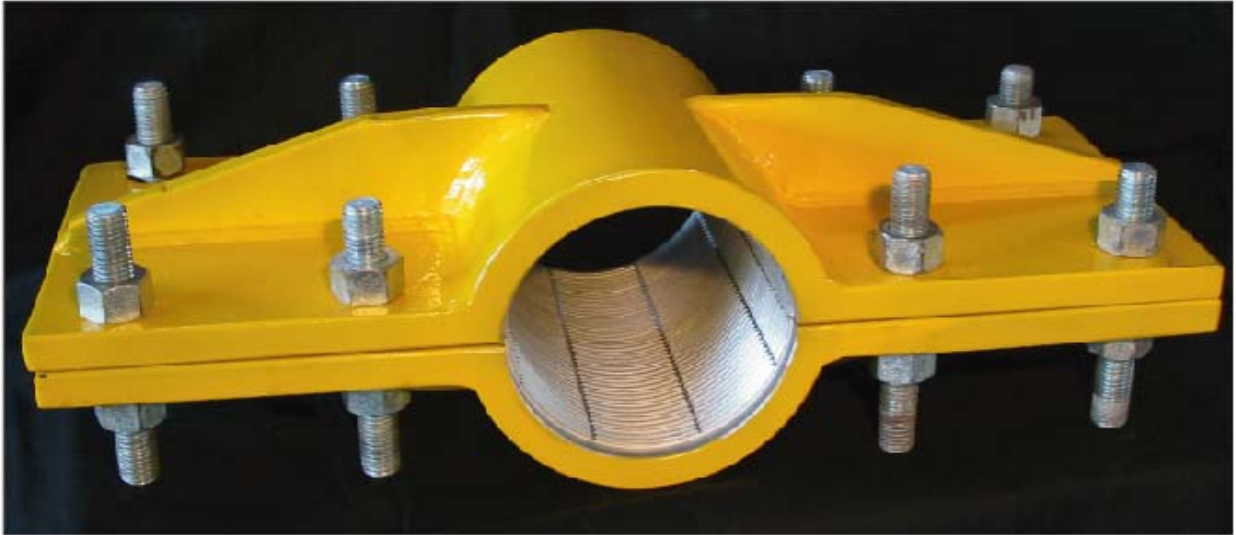
GNY Equipment, offers Casing Clamps, a mechanical device designed to facilitate the hoisting or suspension of casing in a borehole. Casing Clamps are made by forming a half circle in a heavy steel plates and reinforcement supporting webs (ribs) are welded to the half circle shells. When bolted tighter, in pairs, the Casing Clamp fits around the outside and tightly grips the casing. The size of the clamp is determined by the outside diameter of the casing to be handled. Generally used for Drilling Operations.

GNY CASING CLAMPS: Features and Benefits...

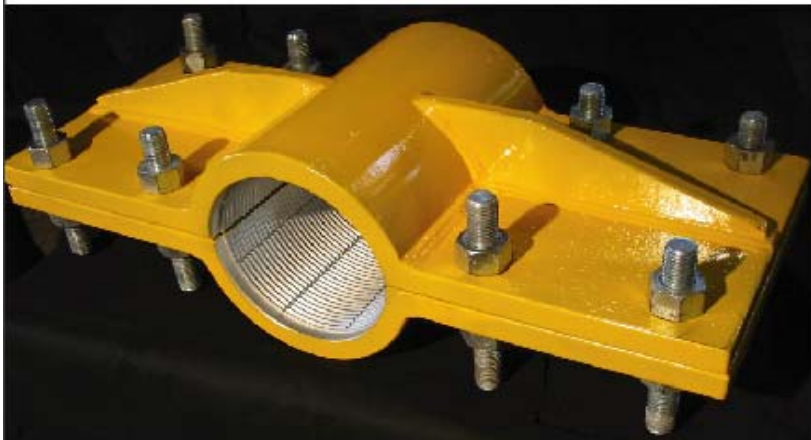
- **Size:** From 4½" OD, 7" OD, 9-5/8" OD, and higher sizes up to 20"OD Casing pipes as per API 5A.
- Casing Clamps are **designed as per API** specification for casing pipes.
- **Material of Construction:**
 - **Carbon Steel Body:** ASTM Plate A829 Gr. 8620 or equal, high-yield steel. And other material up on request for specific application.
 - **Studs and Nuts:** High tensile A 193 B7 and A 194 2H (heavy duty) with spring washers. Clamps are designed and supplied with total of eight (four each on both sides) of high tensile studs (min. 25mm/ 1") size with hex nuts and washers on both sides.
- **Suitable for mounting** on 4½"OD, 7"OD and 9-5/8"OD etc. Casing with built-in, machined out, Case hardened unidirectional **unique grip** (specially designed grip profile of ¼" pitch x 4 Grips/inch length) Pressure relieved by three/four slots of ½" wide are provided at right angles to grip.
- **Hardening:** Case-hardened up to **50 +/- 2 Rockwell "C"** (equal to 450-480 BHN hardness).
- **Stress Relieved:** All clamp's body are stress relieved after cold-forming and welding of reinforcement webs before case-hardening.
- **Over-All-Length** of the clamps: for 7" and 9-5/8"OD, overall length is 12.25" length.
- **Lifting lugs/ eyes/ handles** are provided for easy installation and safety.
- **Loading Capacity: 100+Tons** and higher loading capacity. Both sizes of 7" and 9-5/8" clamps are proof tested (for 100 Tons) at factory witnessed by third party inspection agency.
- **Special Tests:** Bending moment or load tests have been conducted during the R&D (research and development) and other required tests can be conducted for specific sizes.
- **Painting:** All clamps are epoxy spray-painted outside and rust preventive red-oxide coated inside.
 - All fasteners are Zinc plated (PTFE coated fasteners are also available).
- **Casing Clamps are suitable** for application in standard service conditions, application in Marine environment and storage in tropical conditions.
- **Provided with documentation** (MTR) and with installation, operation manuals and storage instructions.

GNY CASING CLAMPS FOR DRILLING OPERATIONS

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Case-hardened up to 50 Rockwell "C" and 100 Tons load capacity

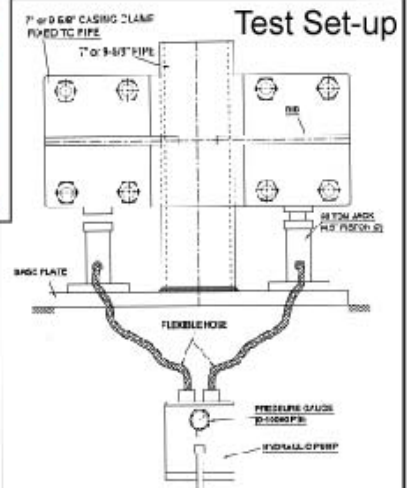


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GNV Casing Clamp Testing

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7" AND 9-5/8" Clamps Under Load Test of 100 Tons



PISTON AREA: $0.7854 \times 4.5^2 = 15.90$ Sq. Inch
Pr. ATTAINED
AT 50 TON LOAD = $50 \times 2240 / 15.90$
= 7044 PSI (487.32 Kg/CM²G)

LOAD TEST OF CASING CLAMPS

Depending on the size and length of Casing Pipe, Load to be sustained by casing clamp is ascertained. Clamp is tightened on the Pipe welded to base plate, using torque wrench. Load is applied on each side of clamp through Hydraulic Jack connected to hydraulic pump, till required load is reached. The grip should not loose hold on pipe up to ascertained load. The set up is as shown in typical sketch on the right side above.

For 7" & 9-5/8" casing clamps Load to be sustained is 100 tons and hence 2 hydraulic Jacks of 50 tons capacity each are provided. Based on dia of piston, area is calculated to find out hydraulic pressure to be applied for reaching the required load. This is approx. 7044 psi for piston area of 15.90 sq. in. of hydraulic jack of 50 tons capacity.

RESULTS: CLAMPS HAS SUCCESSFULLY PASSED THE TEST AND SUSTAINED 100 TONS OF LOAD.