



## The Bolts That Hold Skyscrapers Together: Steelmet's Structural-Grade Secret

### Description

At **Steelmet Industries**, we engineer our **cold drawn steel bright bars** to meet the extreme demands of **structural and load-bearing fasteners** used in bridges, power plants, mining equipment, and heavy industrial machinery – where failure is not an option.

### Why Structural Fasteners Demand Superior Materials

Load-bearing fasteners must withstand:

- ? **Constant vibration and dynamic loading**
- ? **Shear forces** from structural movements
- ? **Corrosive environments** (offshore, chemical plants)
- ? **Temperature extremes** (-40°C to +400°C)

Our specialty:

- ? **Ultra-clean steel** with sulfur  $\leq 0.0025\%$  for hydrogen resistance
- ? **Controlled grain flow** for uniform strength in large diameters

### Critical Applications in Heavy Industries

#### 1. Civil Infrastructure

- **Bridge expansion joint bolts** (ASTM A490)
- **Wind turbine foundation bolts** (EN 14399 HV)
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## Seismic retrofit anchor systems

## 2. Heavy Machinery

- Mining shovel bucket pins
- Crusher frame bolts
- Hydraulic press tie rods

## 3. Energy Sector

- Boiler tube hanger bolts (ASTM A193 B16)
- Flange bolts for high-pressure piping
- Nuclear containment vessel studs

## Technical Specifications

Grade	Standard	Proof Load (MPa)	Charpy Impact (J)	Corrosion Solution
AISI 4140	ASTM A193 B7	850+	27@-29°C	Cadmium plating
42CrMo4	EN 14399 HV	1100+	55@-40°C	Hot-dip galvanizing
B7M	NACE MR0175	725+	34@-46°C	Xylan coating
AISI 8740	ASTM A320 L7	950+	40@-60°C	PTFE impregnation

\*Special processing available:

- Rolled threads (vs cut) for 30% greater fatigue life
- Ultrasonic testing of 100% of critical fasteners
- Dimensional certification to EN 10204 3.1/3.2\*

## Why Steelmet is Trusted for Critical Fasteners

- ? **Heavy industry expertise** – 15+ years serving EPC contractors
- ? **Large diameter capability** up to 150mm
- ? **Material traceability** with full mill certifications
- ? **Technical partnership** from design to manufacturing

For structural fastener solutions that won't compromise, visit [Steelmet Industries' website](https://www.steelmet.in) or request our Heavy Industry Fastener Guide.

### Category

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