

ENA Q125-HCI from EVRAZ North America is an alloy steel OCTG grade designed for high collapse applications in which enhanced internal yield pressure is desired. ENA Q125-HCI is a seamless, quench and tempered alloy meeting the requirements of API 5CT Q125 casing. ENA Q125-HCI will be monogrammed as API 5CT Q125.

| GEOMETRY | Outside Diameter | Nominal Weight T&C | Wall Thickness |
|--|------------------|--------------------|----------------|
| Imperial (USC) | 9.625" | 53.50 lb/ft | 0.545" |
| Metric (SI) | 244.48 mm | 79.62 kg/m | 13.84 mm |
| Development work on other sizes is ongoing | | | |

MANUFACTURING

| | |
|---|---|
| STEELMAKING: Fine grain practice Clean steel practice | PIPE: Seamless Pipe Quench and tempered pipe to ensure a fully tempered martensitic structure |
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CHEMICAL COMPOSITION

| Max Mass Fraction % | API Q125 | ENA Q125-HCI |
|---------------------|----------|--------------|
| C | 0.35 | 0.35 |
| Mn | 1.35 | 1.35 |
| Cr | 1.50 | 1.50 |
| Mo | 0.85 | 0.85 |
| P | 0.020 | 0.020 |
| S | 0.010 | 0.010 |
| Ni | 0.99 | 0.99 |

Chemistry meets requirements of API 5CT Q125 material.

INSPECTION AS PER API 5CT Q125

including:

- 100% volumetric EMI inspection including transverse, longitudinal and oblique N5 notches and 100% wall thickness measurement
- 100% volumetric UT inspection, including transverse, longitudinal and oblique N5 notches and 100% wall thickness measurement
- Casing shall be inspected to SR2
 - Pipe inspected for imperfections greater than 5% of the specified wall thickness. These imperfections shall be considered defects and shall be dispositioned as allowed by API 5CT
- Special End Area (SEA) inspection on every pipe
 - Visual and MPI of both the internal and external surfaces of the pipe ends is performed to detect the presence of transverse and longitudinal defects
 - SEA inspection and automated pipe body inspection overlap by a minimum of 50 mm (1.97")

| MICROSTRUCTURE AND MECHANICAL PROPERTIES | | API 5CT Q125 | ENA Q125-HCI |
|--|-----------|--------------|--------------|
| TENSILE MPa (KSI) | | | |
| YS (0.5% EUL) | MPa | 862 - 1034 | 931 - 1034 |
| | KSI | 125 - 150 | 135 - 150 |
| UTS | MPa | 931 min | 931 min |
| | KSI | 135 min | 135 min |
| HARDNESS (HRC) | | | |
| Max Variation | | 3 HRC | 3 HRC |
| COLLAPSE VALUE MPa (Psi) | | | |
| | MPa | 58.2 | 65.4 |
| | psi | 8440 | 9480 |
| LC MINIMUM JOINT STRENGTH* | | | |
| | kN | 7094 | 7517 |
| | 1,000 lbf | 1595 | 1690 |

* ENA Q125-HCI uses a regular API 5CT Q125 coupling

CORROSION PERFORMANCE

ENA Q125-HCI should only be used in environments that do not contain H₂S. It has been designed similarly to API 5CT Q125 with no maximum hardness restrictions.

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