



engineering
trasporto sollevamento

5T@10m 10T@7m



LNG Solutions

The way to lift your ideas

THE COMPANY

ETS is a Leading Company for the manufacturing of Lifting Devices dedicated to the OIL & Gas market both On-Shore & Off-Shore.

ETS main responsibility is towards the continuous improvement of the quality of the product with special attention to environment and safety.

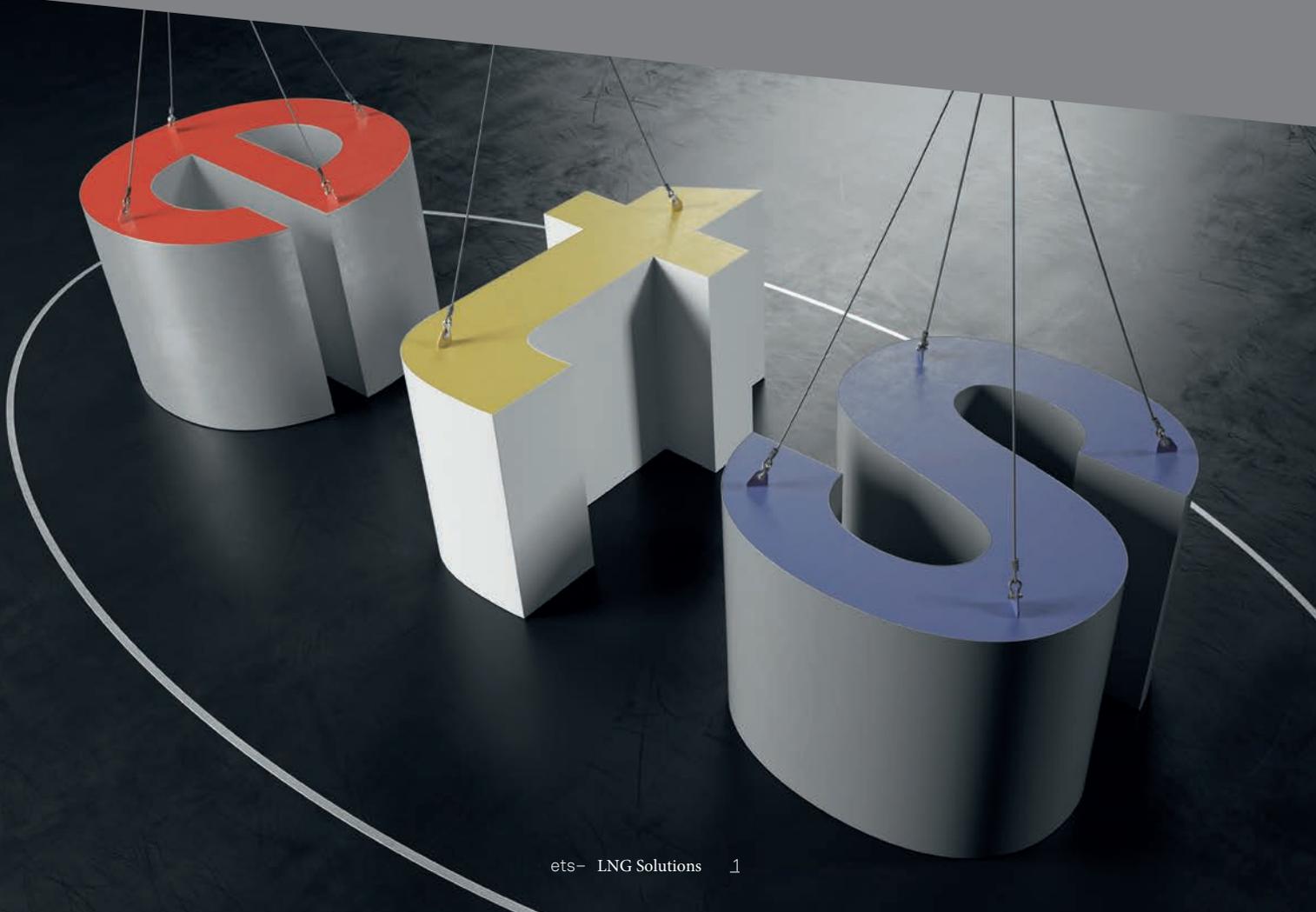
Modern technologies, constant training and commitment are the key factors that complete the great experience matured in the lifting sector after more than 40 years of activities.

Each achievement is the lifeblood for a new challenge.

Commitment, expertise, flexibility, innovation make ETS one of the most fair and dynamic companies of this sector in Europe with thousands of projects awarded all over the world for all major EPC companies.

Follow us in our daily endeavor to study, design and realize for you.

THE WAY TO LIFT YOUR IDEAS.



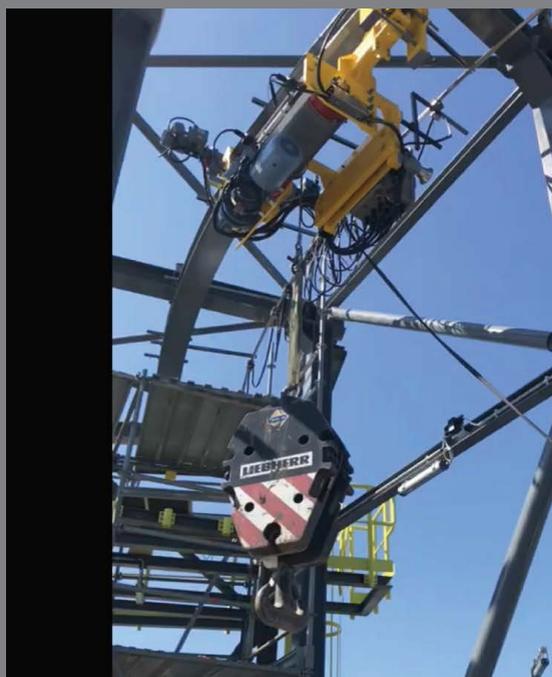
QUALITY

ETS Engineering Spa besides the design and production of cranes and hoists in accordance with Machine Directive 2006/42/EC, is also to design and produce cranes and hoists in accordance to European Directive Atex 2014/34/EU.

ETS is certified **ISO 9001, ISO 14001 and ISO 45001** and notified through Bureau Veritas for the production of explosion-proof cranes with deposit of Technical File of Risk Analysis as prescribed by the Annex VIII of Atex Directive.

All products ETS satisfy safety requirements for explosion-proof areas Group II and Category 2 a 3 (Zone 1 and Zone 2 for Gas plus Zone 21 and 22 for Dust).

The explosion-proof classification comply with Exd and Exd/e enclosure protection.



EXPLOSION PROOF
WIRE ROPE HOISTS
FOR LNG TANK
Articulated trolley
for curved monorail
3200 kg. / lift 55 mt.





LNG WORLD

Liquefied natural gas (LNG) is natural gas (predominantly methane, CH₄, with some mixture of ethane, C₂H₆) that has been cooled down (to -161 to -164°C) to liquid form for ease and safety of non-pressurized storage or transport. In this state it is odourless, colourless, only slightly toxic and non-corrosive.

LNG is an important alternative to pipeline natural gas. Since Natural gas is highly flammable it is required to follow most stringent safety regulations to avoid risk of explosion.

ETS engineering Spa is a worldwide leading specialist on EXPLOSION PROOF SOLUTIONS with lifting products in compliance with ATEX directive and IECEx regulations.



Main features

- Limit Switch for all movements;
- Operating Temperature -20 ° C / + 55 ° C;
- Std. Supply voltage 400 V / 50 Hz;
- TEFC IC 411 motors;
- Motor Duty S4;
- Routine testing on motors;
- Hook DIN 15401
- Hook Bronze Coated;
- Solid Bronze Wheels;
- Safety rope Coeff. 5;
- Painting C5-M;
- Panels Marine Aluminum Copper Free;
- Cable Glands Nickel Brass;
- Steel Guide Rope;
- Pin Load Cell;
- PTC for Motors.

ETS FOR LNG

The range of the hoists guarantees the maximum security for capacities from 2000 Kg. to 35.000 Kg. The WRH rope hoist is manufactured in accordance with the Machines Directive 2006/42/EC and the Atex Directive 2014/34/EU. IECex version, EAC certification, Norsok and UL/NEMA compliance also available.

Hoists are suitable for uses in potentially explosive areas with Eex-d & Eex-d(e) protection for Zone 1 & 2 group 2G & 3G and for Gas (IIA,IIB,IIC) and Zone 21 & 22 group 2D & 3D Dust (IIIB & IIIC) and Temperature Class T3 & T4 & T5.

The three-phase asynchronous motor with IP55 / IP66 protection with insulation class F and overtemperature B allows the highest performances in the respective utilization classes.

WRH ETS wire rope hoist are designed for maintenance work on LNG tanks and installed in many plants and terminals throughout the world.

Thanks to the high-quality components, durable construction, corrosion-resistant painting, 3D modelling system and many other features, they are specifically suitable for use in coastal or marine environment.

The LNG hoists can be designed with single drum or double drum to work in parallel or redundant way and all fitted with final ferrule system on the rope to accommodate LNG Pump wire rope.



Options

- EAC Certification;
- UL or CSA Conformity;
- Operating Temperature -40°C or $+55^{\circ}\text{C}$
- Prototype Tests on Motors;
- SS Panels, Limit Switches or Cable Glands;
- Hoisting Brake manual lever release;
- Special Painting Cycles (ex: Norsok) Nace/Frosio;
- Articulated trolley for curved monorails;
- Rack & Pinion System for Off-Shore applications;
- Heaters for Motors and Panels;
- Canopy for outdoor Installations;
- Sea-Worthy Packing;
- Double Hoisting Brake;
- Encoders for Lifting Motors;
- Wireless Remote Control;
- 3.2 Certificates for Structural Parts;
- Special Voltage up to 690 V & 60 Hz;







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