TARANTO

TUBULAR STEEL DRIVEN PILES

WE KNOW CONCRETE

PILING | FOUNDATIONS | PRECAST

EXPERTISE

Tubular Steel Driven Piles provide a robust and versatile foundation solution. They can be used in most ground conditions including soft alluvium deposits, made ground and contaminated ground. A wide range of pile sizes, joints and rig types allow tubular steel driven piles to be used as the foundation for the majority of structures including commercial, industrial, domestic dwellings, marine and heavy civil works.

Tubular steel piles consist of segmental lengths of heavy walled steel sections of nominal lengths of 3m – 12m. These sections are driven into the ground for any length and transfer the superstructure loads to an underlying founding strata of suitable strength. Piles can be a single section, or several sections can be joined together to provide longer piles for deeper ground conditions.

Driven steel piles provide a clean and quickly installed displacement piled foundation, and are immediately ready for follow on trades. No spoil is produced during the installation process as the pile displaces the lower level strata as it is driven deeper into the ground. During displacement the soil at the toe of the pile is compacted to a greater density allowing the pile to achieve increased end bearing capacities. Additional pile load capacity is gained through skin friction along the shaft of the driven pile.

The heavy wall section of a tubular steel driven pile provides a leading cutting edge. This feature can be used to provide lateral stability to foundations in very soft ground conditions, or can provide fixity of the pile toe in sloping bedrock.

The cutting edge of the pile will penetrate hard rock and dense materials to achieve both the vertical load and pile stability required.

Tubular steel piles can be used in vibration sensitive locations. The slender, open ended section of the tubular steel produces significantly less vibration during installation than other driven pile types such as driven precast concrete or driven cast in-situ. The vibration produced during installation of tubular steel piles is generally 65% less than other driven piling techniques.

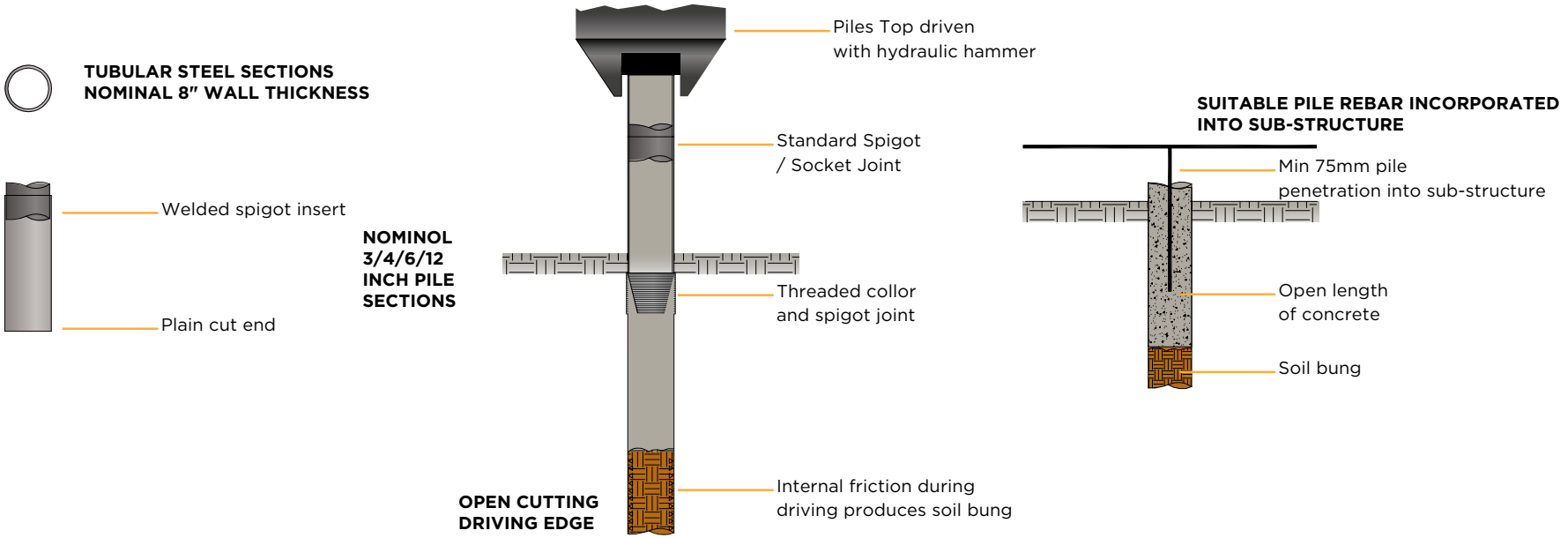
Driven steel piles maintain their shape and integrity during installation and are not susceptible to necking or loss of integrity.

Dynamic pile testing can verify the structural capacity and integrity of a pile and will demonstrate the piles interaction with its surrounding ground. Static pile testing can be used to physically measure the compressive, shear, tension and moment capacity of a pile.

TARANTO TUBULAR STEEL DRIVEN PILE CAPABILITIES

Steel Pile Size (Diameter mm)	**145**	**178**	**244**	**339**
Load Capacities:				
Compression (kN)	400	600	1000	1250
Lateral/Shear (kN)	30	60	100	150
Tension (kN)	200	400	600	800
Moment (kNm)	40	80	150	250
Tube Wall Thickness (nominal) (mm)	8	10	12	12
Pile Joint Detail:				
Compression Only detail	✔	✔	✔	✔
Driven Mechanical Joint	✔	✔	✔	✔
Screw Mechanical joint			✔	✔
Typical Rig Weight (Tonnes)	18-22	22-25	25-60	25-60

TUBULAR STEEL DRIVEN PILES



OUR PRODUCT BENEFITS

- Reduced vibration levels
- Pile stability in sloping rock conditions
- Capability to deal with obstruction
- No spoil or wastage
- Minimum site preparation
- Multi pile size range

EXPERIENCE

Taranto has over 25 years of experience in the use of tubular steel driven piles, and has been a market leader in the development of design standards and geotechnical analysis of steel driven piles.

Our in-house design team analyse the geotechnical aspects of each site and provide bespoke pile design calculations for each project. Prior to works our design team can provide calculations of the anticipated noise and vibration levels expected during pile installation.

SOLUTIONS

Taranto offers a wide range of tubular steel driven pile sizes ranging from 145mm diameter to 339mm diameter. Pile joint types range from compression joints to mechanically jointed piles with considerable compression, shear, tension and moment capacities. Our extensive range provides cost effective solutions compared with other deep foundation techniques, as our clients only ever use the pile size and length they require. With the technical expertise of our in-house geotechnical design team, piles are designed and manufactured specific to existing ground conditions and our clients' requirements.

Taranto maintains a continued programme of investment in our modern pile driving equipment. All our driven rigs are track mounted and range from 18 tonne Komatsu rigs suitable for commercial, domestic and self-build works, up to 65 tonne long mast Juntan rigs suitable for large commercial, industrial and civil projects.

TARANTO

bsi. ISO 9001 Quality Management

bsi. ISO 14001 Environmental Management

bsi. OHSAS 18001 Occupational Health and Safety Management

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