

OFFSHORE RACKS FOR INDUSTRIAL BATTERIES

1.0 SUPPORT FRAMES

1.1 MATERIALS

Support frames are manufactured from square hollow section steel with a section of 40 x 40 x 2.5mm. Tubing will comply with BS EN 10113: 1993: Part 1

1.2 SURFACE TREATMENT

Where required, the material will be pickled prior to processing. All material will be washed and phosphate treated prior to surface coating.

1.3 COATING

Frames are coated with epoxy. The standard colour specified is RAL9011 (Satin Black). Minimum thickness specified is 70µm. (See NTS02 for details)

2.0 RUNNERS (SUPPORT BEAMS)

2.1 MATERIALS

Runners are manufactured from square hollow section steel with a wall thickness of 2.5mm. Tubing will comply with BS EN 10113: 1993: Part 1

2.2 SURFACE TREATMENT

Where required, the material will be pickled prior to processing. All material will be washed and phosphate treated prior to surface coating.

2.3 LOADING CAPACITY

The load bearing capacity of a runner is defined by the calculated deflection under maximum load at its midpoint. Maximum deflection allowed is 0.6mm. Under such deflection, stress in the runner will typically be around 20% of yield stress.

2.4 COATING

Runners are coated with epoxy. The standard colour specified is RAL9011 (Satin Black). Minimum thickness specified is 70µm. (See NTS02 for details)

3.0 BATTERY RETAINING RAILS

3.1 MATERIALS

Retaining rails are manufactured from square hollow section steel with a wall thickness of 2.5mm. Tubing will comply with BS EN 10113: 1993: Part 1

3.2 SURFACE TREATMENT

Where required, the material will be pickled prior to processing. All material will be washed and phosphate treated prior to surface coating.

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3.3 COATING

Retaining rails are coated with epoxy. The standard colour specified is RAL9011 (Satin Black). Minimum thickness specified is 70µm. (See NTS02 for details)

4.0 BRACES

4.1 MATERIALS

Braces are manufactured from flat steel strip 30mm wide x 8mm thick. Strip material will comply with BS EN 10113: 1983: Part 1.

4.2 SURFACE TREATMENT

The material will be pickled prior to processing. All material will be washed and phosphate treated prior to surface coating.

4.3 COATING

Braces are coated with epoxy. The standard colour specified is RAL9011 (Satin Black). Minimum thickness specified is 70µm. (See NTS02 for details)

5.0 FASTENERS

5.1 MATERIALS

All male fasteners will comply with BS3692 or DIN931 and will be grade 8.8. All female fasteners will comply with DIN934 and will be grade 8.

5.2 COATING

All fasteners are to be supplied in a Bright Zinc Plate condition.

6.0 BOLT DOWN BASEPLATES

6.1 MATERIALS

Baseplates are manufactured from flat steel strip 100mm wide x 10mm thick. Strip material will comply with BS EN 10113: 1983: Part 1.

6.2 SURFACE TREATMENT

The material will be pickled prior to processing. All material will be washed and phosphate treated prior to surface coating.

6.3 COATING

Baseplates are a welded assembly with the support frame and therefore also coated with epoxy. The standard colour specified is RAL9011 (Satin Black). Minimum thickness specified is 70µm. (See NTS02 for details)

6.0 DESIGN BASIS

6.1 STRUCTURE

Offshore designation for a rack specifies that it satisfies the more rigorous requirements

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for equipment to be used in offshore applications. The rack design is substantial and able to resist a good degree of external dynamic loadings. They are suitable for use on offshore platforms and other similar environments where occasional high 'g' level shocks with small displacement are possible and regular low acceleration movement or vibration is a possibility. It should be noted that they are of a generic design and individual solutions are not analysed structurally. For critical dynamic applications it is strongly recommended that seismic solutions are employed.