KNOWLEDGE

Anchor Selection

Anchor includes anchor head or crown, crown Pin or Stock, Fluke, Shank and Anchor Shackle.

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Key Highlights

Category	Knowledge
Standard	DIN
Material	The efficiency of an anchor in a given test is expressed in terms of “Ho...
Weight / Size	Rock or Marl, pool holding ground where an anchors’ dead weight is it’s ...
Certificate	ABS, LR, BV, DNVGL, NK, KR, IRS, RMRS, CCS

We can supply according to your requirement, drawings, class certificate needs, and delivery schedule.

Technical Specifications

Category	Knowledge	**Model / SKU**	Anchor-Selection
Standard	DIN	**Material**	The efficiency of an anchor in a given test is expressed in terms of “Holding Power” per kg of its own weight, not in “Proof Test” Which indicated physical properties of the material.
Weight / Size	Rock or Marl, pool holding ground where an anchors’ dead weight is it’s only asset.	**Certificate**	ABS, LR, BV, DNVGL, NK, KR, IRS, RMRS, CCS
Warranty	12 Months unless specified otherwise	**Origin**	China

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Optimum design of an anchors is influenced by the specific composition of the ocean floor and categorized into three groups:

1. Mud or silt which varies the most in consistency and offers little resistance to forces.
2. Sand, Ideally the most consistent and where anchors specifically designed reach excellent holding efficiency
3. Rock or Marl, pool holding ground where an anchors' dead weight is it's only asset.

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The fluke angle of an anchor has a definite effect upon the holding power, the flukes should enter the bottom at an angle that will low the crown or head to penetrate to a depth which can produce maximum efficiency:

Additionally, it has been determined that:

1. The angle of fluke penetration in mud bottoms should be approximate 50^{o}.
2. In sand the penetration angle should be the area of 30^{o}.
3. For anchoring in various bottoms a compromise approximating 43^{o} is desirable.

Other considerations in selecting anchor should include:

1. Convenience for handling and stowing
2. Aptitude for taking hold.
3. Physical Strength.
4. Freedom from fouling, which all anchors occasionally do, but some do in lesser degrees.
5. Influence developed by the chain's catenary which absorbs shock loads and lowers the angle of pull at the anchor by its weight

The anchor is the key to effective anchoring or mooring, it is essential to know what to expect from various anchors. The resistance of anchor to being dragged through a soil has been considered as occurring in two stages:

a) Biting into the bottom due to the plowing effect of the flukes

b) Maintain a continuous resistance to drag after it is planted into bottom.

Holding power is directly proportional to projected fluke area and shear strength of the bottom material and inversely proportional to penetration-area resistance. In many cases, a smaller anchor with favorable fluke area to weight ratio is more dependable than a heavier anchor. Holding Power for the two most widely used anchors are as follow:

1. Stockless Type Anchor, in sand, develop a holding power to weight ratio of seven to one. In Mud they develop three to one, the angle of penetration in both cases is 45 degree.
2. Light Weight Type Anchor, in sand, develop a holding power to weight ratio of twenty to one, with the angle of penetration being 30 degree. In mud they develop nine to one with the angle of penetration being 50 degree.

The depth of penetration in all preceding cases is compiled from three to seven greet in sand and from seventeen to twenty feet in mud. All calculations incorporate a 0^{o} scope angle.