Mooring Systems

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Mooring Systems

Importance of Mooring
Types of Mooring
Calculation of Forces Acting on Mooring Systems
Components of Mooring
Maintenance of Mooring

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Moorings are required to hold cages against the forces generated by wind, currents and waves, and to allow the fish stocks, and the cages and nets the best chance of survival.
Types of Mooring

Parameters Which Effects Type of Mooring

Material and Design of Fish Farm Cages
Environmental Conditions
Size and Numbers of Cages
Types of Mooring

Material and Design of Fish Farm Cages

Steel Cages
Plastic Cages
Circular Cages
Rectangular or Polygonal Cages
Floatation System of Cages
Types of Mooring

Steel Cages
- Heavy
- Non Flexible
- Need Maintenance
- Hard to Build
Types of Mooring

Plastic Cages
- Relatively Light
- Flexible
- No Need Maintenance
- Easy to Build
Circular Cages

- Reduce Resistance Against Water Movements
- Flexible
- Provide Good Environment for Fishes
- Easy to Operate
Types of Mooring

Rectangular or Polygonal Cages

- Increase Resistance Against Water Movements
- Semi Flexible
- Easy to Operate
- Specially Preferred for Small Size Stocking
Types of Mooring

**Flotation System of Cages**

Submersible Cages
- Exposed Current Drag Forces
- Protected Against Surface Movements and Wind Forces

Floating Cages
- Relatively Protected Against Current Drag Forces
- Exposed Surface Movements and Wind Forces
Types of Mooring

Environmental Conditions

Water Currents
Waves
Winds
Depth of Site
Distance From Shore
Type of Bottom
Water Temperature
Salinity
Sun Exposure
Types of Mooring

Twin Moorings
Types of Mooring

Radial Moorings
Types of Mooring

Orthogonal Moorings
Calculation of Forces Acting on Mooring

Wind and Current Forces
- Wind Pressure on Surface
- Current Drag on Nets and Cage Structure

Wave Forces
- Drift Force
- Orbital Movements
Components of Mooring

Anchors
Mooring Lines
Mooring Buoys
Steel Plates and Rings
Shackles
Swivels
Thimbles
Chains
Lights
Navigation Buoys
Components of Mooring

Anchors

Types of Anchors
Weight of Anchors
Holding Capacity
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Components of Mooring

Mooring Lines

Types of Lines
Strength of Lines
Elasticity of Lines
Components of Mooring

Mooring Buoys

Floatation Capacity of Buoys
Structure of Buoys
Components of Mooring

Steel Plates and Rings
Components of Mooring

Shackles
Components of Mooring

Swivels
Components of Mooring Thimbles

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Components of Mooring

Chains

Stud Link Chains
Open Link Chains
Components of Mooring

Lights

Visibility Range
Color of Light
Flashing
Frequency
Components of Mooring

Navigation
Buoys
Maintenance of Mooring

Visual Inspections
Routine Cleaning Service
Repositioning of Anchors
Mooring Design & Illustrations
Asakua Su Urunleri Ltd.
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ECOS Mooring Installation Project
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Thanks!