

TECHNICAL REQUIREMENTS FOR HELICOPTER LANDING GRID

1. **Purpose.** Landing grid is used to secure the Helicopter against flight deck.

2. **Design.**

(a) Design Standard NATO's STANAG 1276

(b) Landing Grid is to be designed for the following parameters: -

(i) Traction Weight - 11 MT

(ii) Permissible Compression load - 21500 Kgs

(iii) Overall Diameter - 2750mm.

(iv) Useful Diameter - 2500mm.

(v) Total maximum weight of Grid - 3000 Kgs.

(vi) Depth should not exceed 200mm.

(c) The Landing Grid is to be supplied with suitable drain arrangement, Rubber/ Neoprene cover & securing arrangement.

3. **Environmental Conditions.** The equipment should function smoothly under extreme tropical conditions as mentioned below: -

Ambient Air temperature	45 Degrees C
Sea Water temperature	35 Degrees C
Relative humidity	100% at 35 Degrees C
Roll	+/- 30 Degrees
Roll Period	10 Seconds
List	+/- 20 Degrees
Pitch	+/-7 Degrees
Pitching period	10 Seconds.

4. **Shock Test.** The equipment and its accessories should be capable of withstanding shock accelerations as per Shock Grade NSS-II. The actual shock calculations or shock test results should be furnished as a support of proof.

5. **VibrationTest.** The parts of the equipment and its accessories are to be designed to ensure resistance to fracture, distortion or misalignment due to forces of vibration.

6. **Material Specification.** The material of construction of Grid shall be Stainless Steel. The properties are as detailed below: -

(a) **Mechanical Properties.**

Yield stress	- 8000 Kgf/cm ²
UTS	- 9500 Kgf/cm ²
Impact strength	- 35 Joules/cm ² (20 deg C)
Elongation	- 14% on 5D

- (b) **Chemical Composition.**
- | | |
|------------|---------------|
| Carbon | - 0.06% (max) |
| Manganese | -1.0% (max) |
| Silicon | -0.4% (max) |
| Nickel | -4.5-6.0 % |
| Chromium | -14.5-17.0 % |
| Molybdenum | -0.7-1.1 % |

7. **Tests and Trials.** Test load is to be applied at the Centre of grid. The same has to be calculated considering Harpoon traction of 11 tons and compression load of 21.5 tons.