

## **STABILISED HORIZON REFERENCE SYSTEM DESCRIPTION**

The Stabilised Horizon Reference System (SHRS) is an illuminated bar that remains horizontal irrespective of the ships roll motion. This provides the pilot with a “True Horizon” reference whilst those lights fitted to the ships superstructure continue to show the ships actual angle of roll.

### **Dynamic Accuracy**

- The SHRS has a dynamic accuracy of  $0.5^\circ$  over the range  $\pm 15^\circ$  roll
- The illuminated length will be not less than 2.5m such that it is clearly visible to the pilot at 0.5nm
- The accuracy of the system and the intensity of the light output are not reduced due to water, snow or the formation of ice on the SHRS

### **Mechanical Stop**

- Adjustable mechanical stops are fitted to prevent excessive motion

### **Light Intensity**

- The LED lighting shall has an output of approximately  $55 \text{ Cd/m}^2$  such that it is visible at 0.5nm from the ship on a clear dark night

### **Stabilisation Failure**

- Failure of the roll stabilisation mechanism is indicated by a red warning light
- This light is visible to the pilot at 0.5nm and clearly distinguishable from a wave off light
- The SHRS can be manually set to zero such that it aligns with the edge lights fitted to the hanger
- An automatic locking mechanism is fitted to lock the SHRS in the zero position in the event of power failure

### **Rate and Extent of Roll Motion**

- The SHRS performs to specification over the range of  $\pm 15^\circ$  from horizontal in a 10 second time period

### **Night Vision Goggle Compatibility**

- The SHRS is compatible with the use of Night Vision Goggles (NVG) as defined in STANAG 1445

### **Reliability**

- Time to replace a lamp is less than 5 minutes
- The LED lamp life is calculated to be greater than 500,000 hours

### **Mounting Arrangement**

The SHRS is mounted on the aft face of the hangar, facing aft and may be incorporated into the hangar roof enclosure.