# Rigging Information

# **BLOCK AND SHEAVE INSPECTION**

AS A MINIMUM, EXAMINE THE FOLLOWING INSPECTION POINTS. REMOVE FROM SERVICE OR CORRECT BEFORE USE:

- 1. EXCESSIVE WEAR ON PINS OR AXLES, ROPE GROOVES, SIDE PLATES, BUSHINGS OR BEARINGS AND END FITTINGS,
- 2. DEFORMATION IN SIDE PLATES, PINS AND AXLES, LIFTING ATTACHMENT POINTS AND TRUNNIONS.
- 3 MISALIGNMENT OR WORRLE IN SHEAVES
- 4. SECURITY OF NUTS, BOLTS, AND OTHER LOCKING METHODS.
- 5. MISSING OR LOOSE SNAP RINGS ON PINS.
- 6. EXCESSIVE END PLAY OF SHEAVE BEARINGS ON SHAFT, MORE THAN .031 CLEARANCE PER SHEAVE WITH BUSHING OR STRAIGHT ROLLER BEARINGS.
- 7. EXCESSIVE SWIVEL CASE CLEARANCE (MORE THAN .12" .18")
- 8. HOOK WITH DEFORMATION, CORROSION OF HOOK OR NUT THREADS, MISSING OR DEFECTIVE LATCH.
- 9. WELDING SIDE PLATES WITH WELD CRACKING OR CORROSION.

# **SHEAVE GROOVE**



"NO DAYLIGHT"
BETWEEN
GROOVE AND
GAUGE SHOWS
GROOVE
ACCEPTABLE



"DAYLIGHT"
BETWEEN GROOVE
AND GAUGE
SHOWS WEAR



CORRUGATED GROOVES ACCELERATE WEAR OF WIRE ROPE

#### **FLEET ANGLE**

FLEET ANGLE IS THE ENTRANCE AND EXIT ANGLES OF THE WIRE ROPE RELATIVE TO THE SHEAVE

FLEET ANGLE SHOULD BE NO MORE THAN 1-1/2 DEGREES TO 2 DEGREES



# **BLOCK HOOK INSPECTION**

## CROSBY RECOMMENDS AS A MINIMUM:

- A visual inspection for cracks, nicks, wear, gouges and deformation as part of a comprehensive documented inspection program, should be conducted by trained personnel in compliance with the schedule in ANSI B30.10.
- For hooks used in frequent load cycles or pulsating load, or exposed to corrosive conditions (Road Salt, etc.) the hook and thread should be periodically inspected by Magnetic Particle or Dye Penetrant.

### LUBRICATION OF HOOK BEARINGS:

**Anti Friction** — Every 14 days for frequent swiveling; every 45 days for infrequent swiveling.

**Bronze Thrust Bushing or No Bearing** — Every 16 hours for frequent swiveling; every 21 days for infrequent swiveling.

## **ANSI B30.10 INSPECTION FREQUENCY**

- 1. Frequent Inspection visual examinations by the operator or other designated person.
  - (a) normal service monthly.
  - (b) heavy service weekly to monthly
  - (c) severe service daily or weekly
  - (d) special or infrequent service as authorized by a qualified person - before and after each occurrence, with records of the operation.
- Period Inspection visual inspections by an appointed person making records of apparent external conditions to provide the basis for continuing evaluation.
  - (a) normal service equipment in place yearly; (definition: service, normal - service that involves operating at less than 85 percent of rated load except for isolated instances.)
  - (b) heavy service as in normal service, unless external onditions indicate that disassembly should be done to permit detailed inspection yearly; (definition: service, heavy service that involves operating 85 percent to 100 percent of rated as a regular specified procedure.)
  - (c) severe service as in heavy service, except that the detailed inspection may show the need for use of nondestructive type of testing - quarterly; (definition: service, severe - heavy service coupled with abnormal operating conditions.)

FOR ADDITIONAL INFORMATION REFER TO ASME B30.10 AND OSHA 1910.179 OVERHEAD GANTRY CRANES