Selby Moving Bridge

1 Every Maintenance Examination/Visit

1.1 Records

1.1.1 All Visits

The logbook shall be checked for any recorded faults and completed following completion of the maintenance activity and the electrical installation shall be checked that it is in date for Electrical Inspection and Test to BS7671.

On leaving site complete and sign logbook, then sign out in the Visitor's logbook.

1.1.2 Generator Visits

Complete 'D' exam 'On load run-up' Record. (Form 10)

Complete the 'Annual full functional test report record' (Form 10/1)

2 'B' Examination

2.1 Bridge Raising Jacks

a) The microswitch operating mechanism slide shall be lubricated if required.

b) The actuating shoe ring shall be lubricated if required.

c) The nipples shall be lubricated if required.

d) The glands shall be checked and adjusted if required.

2.2 Rest Blocks

a) The block slides shall be lubricated if required.

b) The manual mechanism (rack and pinion) shall be lubricated if required.

c) The piston rods shall be cleaned and lubricated.

d) The glands shall be checked and adjusted if required.

2.3 Locking Bolt

a) All moving parts shall be lubricated.

b) The cable and chain connections shall be checked for satisfactory condition and security.

c) The alignment shall be checked.

d) The split pins shall be checked for satisfactory condition and security.

e) The chain pulley shall be lubricated if required.

f) The cylinder shall be tested for correct operation.

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2.4 Latches

a) The latch mechanism shall be lubricated if required.

b) The bolt or block shall be checked that it cannot move with the latch engaged.

2.5 Rotating Mechanism

a) The rollers shall be cleaned and lubricated if required.

b) The centre lubricating bottle shall be topped up.

c) The main shaft lubricating bottle shall be topped up.

d) The traverse shaft shall be cleaned and lubricated if required.

e) The hand wheel worm shall be lubricated if required.

f) The neutral/drive shall be wound across to storm gears and back.

g) The engines and accumulator pumps shall be changed over.

h) The turning valve rod shall be checked for satisfactory condition.

i) The gland shall be checked and adjusted if required.

j) By-pass Valve and Constant Pressure Valve

k) The glands shall be checked and adjusted if required.

l) The linkages shall be lubricated if required.

m) Hydraulic Turning Engine

n) The engine isolating valve gland shall be checked and lubricated if required.

o) The reversing cylinder valve gland shall be checked and lubricated if required.

p) The valve box, valve gland shall be checked, and if required, lubricated.

q) The engine piston rod shall be checked and lubricated if required.

r) The oil pots on big end shaft bearings shall be topped up.

s) The oil pots on gearwheel drive unit shall be topped up.

t) The link pins, pivots and linkages shall be lubricated.

u) The engine nuts and fins shall be checked for security.

v) The drip trays shall be emptied.

w) The pipework and machines shall be cleaned.

2.6 Three Throw Pump

a) The oil pots shall be topped up.

b) The gland shall be checked and adjusted if required.

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c) The pump shall be checked for security.

d) The engine room oil tank level shall be checked.

e) The drive belts shall be checked for tension and satisfactory condition.

2.7 Reduction Unit.

a) The drive belts shall be checked for tension and satisfactory condition.

2.8 Diesel Engine (Pump Drive)

a) The fuel and oil coolant levels shall be checked.

b) The engine shall be checked for security.

c) The variable speed control shall be lubricated.

d) The engine shall be cleaned and checked for correct operation.

e) The oil breather and air intake shall be changed.

2.9 Battery (Main DC Power Source – Centre Jetty)

a) The battery tops shall be cleaned and kept dry

b) The electrolyte level of all cells shall be checked and topped up if required.

c) The battery vent caps shall be checked that they are clear of obstruction.

2.10 Battery Charger (For Above)

a) The battery charger shall be checked for correct operation.

2.11 Pump House

a) The main pump shall be checked for leaks and gland adjusted if required

b) The relief valve shall be checked for leaks

c) The air vessel shall be checked for satisfactory condition, leaks and that it is in date for statutory inspection

d) The oil level in the tank shall be checked and topped up if required

e) The oil pump shall be checked for leaks and oil filter cleaned

f) The automatic oilers drip feed settings shall be checked

2.12 Accumulator House

a) The submersible pump shall be checked for satisfactory condition and security

b) The float switch shall be checked for free movement and the pump filter shall be cleaned

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2.13 Control Room

a) The proving bolts shall be checked for satisfactory condition.

2.14 Bridge

a) The end presses shall be checked for satisfactory condition, security and leaks

b) The constant pressure ram cylinder and pistons shall be checked for satisfactory condition, security and glands for leaks

c) The centre press shall be checked for satisfactory condition, security and glands for leaks

d) The slewing ram cylinders and pistons shall be checked for satisfactory condition, security and glands for leaks

e) The bolts and slides shall be lubricated

f) The bed bolts shall be checked for security

g) The slewing chains shall be checked for satisfactory condition and wear

h) The slewing pulleys shall be checked for satisfactory condition and free rotation

i) The pulley centre pins shall be lubricated if required

j) The slewing gypsy shall be checked for satisfactory condition and security.

k) The bridge shall have a functional test carried out

l) The walkway lights shall be checked.

m) The machine/plant rooms shall be swept kept clear of debris.

2.15 Navigation Lights

a) The rectifier cubicles shall be checked for satisfactory condition and security

2.16 Flood Lights

a) The floodlights shall be checked for satisfactory condition, security and operation

2.17 Generator

2.17.1 Engine Start, Control System, Batteries and Charger

a) The battery electrolyte levels shall be checked and topped up if required

b) The battery tops shall be cleaned and kept dry

c) The battery vent caps shall be checked that they are clear of obstruction

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2.18 Starter Motor/Alternator

a) The starter motor / alternator shall be checked for satisfactory condition and security

b) The terminals shall be checked for satisfactory condition and security

2.18.1 Main Alternator and Controls

a) The alternator/generator shall be checked for satisfactory condition and security

b) The brush gear and slip rings / commutator shall be checked for satisfactory condition and security

c) The cables and terminals on alternator/generator shall be checked for satisfactory condition and security

d) The "exciter" shall be cleaned and examined internally

e) The A.V.R. shall be cleaned and checked for satisfactory condition

f) The bearings shall be checked for satisfactory condition and lubricated if required

2.19 Equipment Room

a) The machine/plant rooms shall be swept kept clear of debris.

3 ‘‘C’ Examination

3.1 Bridge Raising Jacks

a) Perform ‘B’ examination

b) The jack shall be checked for satisfactory condition and security.

c) The hydraulic pipes shall be checked for satisfactory condition and security.

d) The microswitches shall be checked for correct operation, satisfactory condition, and security.

3.2 Rest Blocks

a) Perform ‘B’ examination

b) The hydraulic pipes shall be checked for satisfactory condition and security.

c) The rest blocks shall be checked for satisfactory condition and security.

d) The availablility of security bolts shall be checked.

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3.3 Locking Bolt

a) Carry out 'B' examination

b) The microswitches shall be checked for security and correct operation.

c) The Hydraulic pipes shall be checked for satisfactory condition and security.

3.4 Latches.

a) Carry out 'B' examination.

b) The microswitches shall be checked for correct operation, satisfactory condition, and security.

3.5 Rotating Mechanism

a) Carry out 'B' examination.

b) The rack and pinion shall be checked for satisfactory condition and security and lubricated if required.

c) The pipes and connections shall be checked for leaks.

d) The well area shall be cleaned.

e) The rotating mechanism shall be checked for correct operation.

3.6 By-pass Valve and Constant Pressure Valve

a) Carry out 'B' exam.

3.7 Hydraulic Turning Engine

a) Carry out 'B' examination.

3.8 Three Throw Pump

a) Carry out 'B' examination.

3.9 Reduction Unit

a) Carry out 'B' examination

3.10 Diesel Engine (Pump Drive)

a) Carry out 'B' examinations.

3.11 Accumulator Hydraulic

a) The pressure relief valve spring leave and pins shall be checked and lubricated if required.

b) The vertical slides shall be cleaned and adjusted if required.

c) The glands shall be checked out and adjusted if required.

d) The drip trays shall be emptied.

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e) The sump level shall be checked.

f) The limit switch shall be checked for correct operation.

3.12 Power Unit

a) The stroke control shall be checked for correct operation.

b) The microswitch shall be checked that it is only made when the cylinder is in its minimum position.

3.13 Battery (Main d.c. Power Source – Centre Jetty)

a) Carry out 'B' examination.

3.14 Battery Charger (For Above)

a) Carry out 'B' examination.

3.15 Mains Electrical Disconnector

a) The microswitch shall be checked for correct operation and security.

3.16 Pump House

a) Carry out 'B' examination.

b) The centre rolling path and carriages shall be cleaned and checked for satisfactory condition and security

c) The main pump components shall be checked for satisfactory condition and security

d) The main pump shall be lubricated at the grease nipple

e) The main pump motors shall be checked for satisfactory condition and security

f) The auxiliary pump shall be checked for satisfactory condition and security

g) The rev counter shall be cleaned and mechanism lubricated if required

h) The auxiliary pump sump oil level shall be checked and topped up if required

i) The float and limit switch shall be checked for satisfactory condition and security

j) The float and limit switch shall be checked for correct operation

k) The valves shall be cleaned and checked for correct operation

l) The pump motor brushes shall be checked for satisfactory condition

m) The pump motor slip rings shall be checked for satisfactory condition

n) The float and limit switch shall be cleaned and lubricated

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3.17 Accumulator House

a) Carry out 'B' examination.

b) The cross head support fins shall be checked for satisfactory condition and security

c) The glands shall be checked for leaks

d) The slides shall be lubricated

e) The hydraulic momentum valve arm shall be checked for satisfactory condition and security

f) The hydraulic momentum valve pivots shall be checked for satisfactory condition, security and lubricated

g) The main and auxiliary limit switch shall be checked for satisfactory condition, security and correct operation

3.18 Control Room

a) Carry out 'B' examination.

3.19 Bridge

a) Carry out 'B' examination.

b) The actuator units shall be checked for satisfactory condition and security

c) The couplings shall be checked for satisfactory condition and security

d) The rest block limit switches shall be checked for satisfactory condition, security and correct operation

3.20 Navigation Lights

a) Carry out 'B' examination.

b) The lights shall be checked for correct operation.

3.21 Flood Lights

a) Carry out 'B' examination.

3.22 Generator

3.22.1 Engine Fuel System and Storage Tanks

a) The fuel level in the fuel tank shall be checked and topped up if required

3.22.2 Engine Fluids and Fan Belts

a) The engine oil level shall be checked and topped up if required as detailed in the installation data extract

b) The coolant level shall be checked and topped up if required

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