CERTIFICATES OF COMPETENCY IN THE MERCHANT NAVY – MARINE ENGINEER OFFICER

EXAMINATIONS ADMINISTERED BY THE
SCOTTISH QUALIFICATIONS AUTHORITY
ON BEHALF OF THE
MARITIME AND COASTGUARD AGENCY

STCW 95 SECOND ENGINEER REG. III/2 (UNLIMITED)

042-24 – ENGINEERING DRAWING

WEDNESDAY, 17 OCTOBER 2012

1300- 1700 hrs

Examination paper inserts:

Drawing Fig Q1

Notes for the guidance of candidates:

Candidates should attach their drawing to the examination workbook front sheet

Materials to be supplied by examination centres:

Drawing Board Candidate's examination workbook A2 Drawing Paper Tee Square

ENGINEERING DRAWING

Attempt ALL parts of the questions

Marks for each part of the question are shown in brackets

1. Fig Q1 shows details of a LOW LUBRICATING OIL PRESSURE TRIP for a turbine driven cargo pump.

   (a) Draw FULL SIZE the assembled Oil Pressure Trip using the horizontal centreline and face A position as shown in Fig Q1(a) when viewed in the direction of ARROW Y. Assembly to be shown in the setting position:

   - the bottom part in section on a horizontal centreline through the spindle axis; (40)
   - the top part as an outside view above the horizontal centreline. (25)

   Note: Face A on piston to line up with Corner B on casting.

   (b) Draw in "Chain Line" the position of the setting lever and steel latch in Operational Mode. (16)

   (c) Complete the drawing by adding the following:

   (i) a parts list of TWELVE main individual items, clearly identified on the assembled view; (12)

   (ii) a title; (1)

   (iii) SIX main assembly dimensions. (6)

The drawing should be in accordance with B.S. 308:1993 and hidden detail should be omitted.

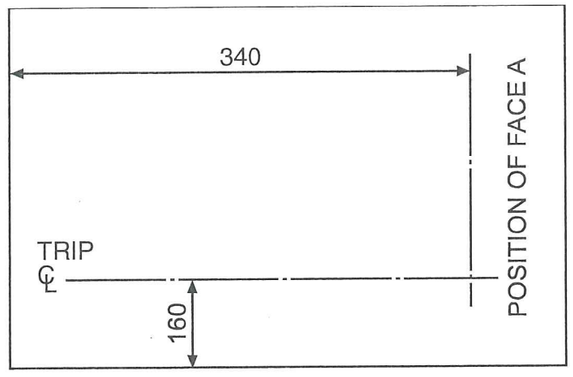
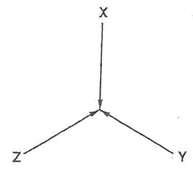
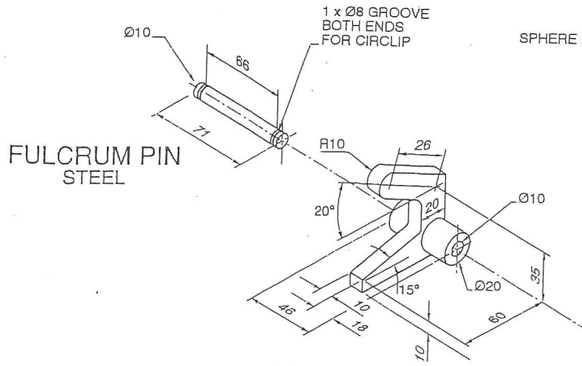
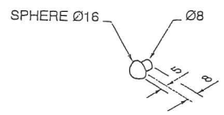


Fig Q1(a)

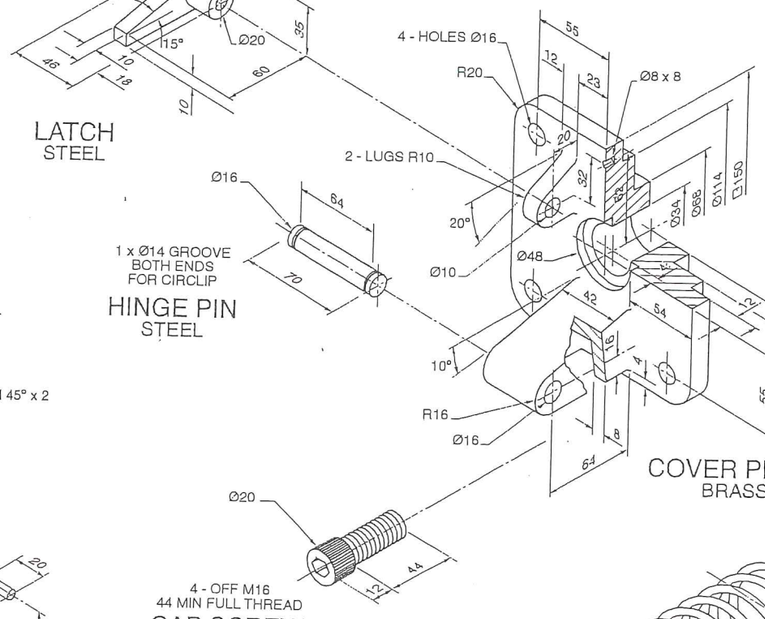




FULCRUM PIN
STEEL



HEEL PIN
STEEL

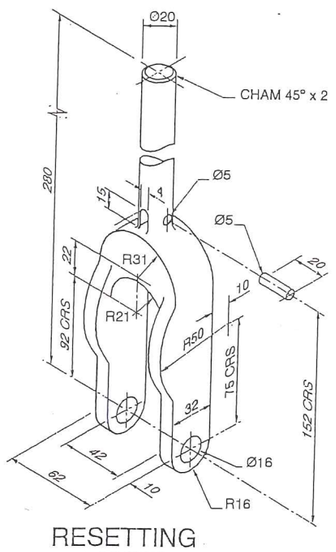


LATCH
STEEL

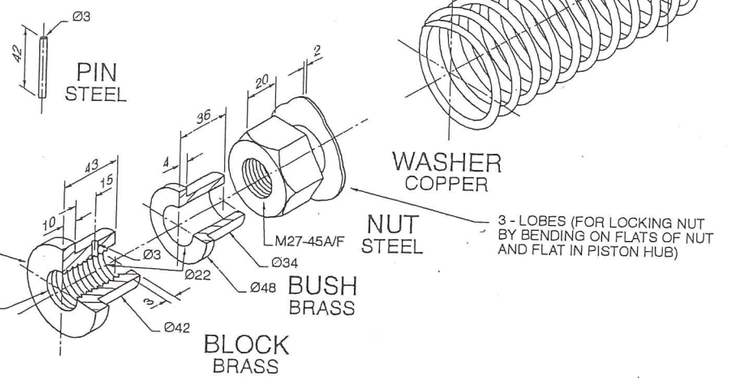
HINGE PIN
STEEL

COVER PLATE
BRASS

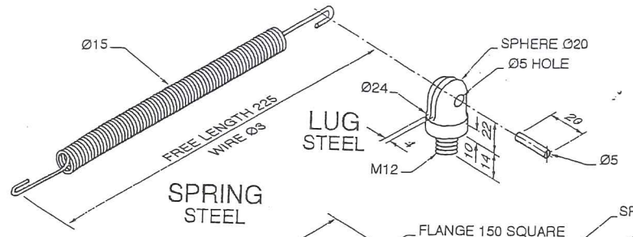
4 - OFF M16
44 MIN FULL THREAD
CAP SCREW
STEEL



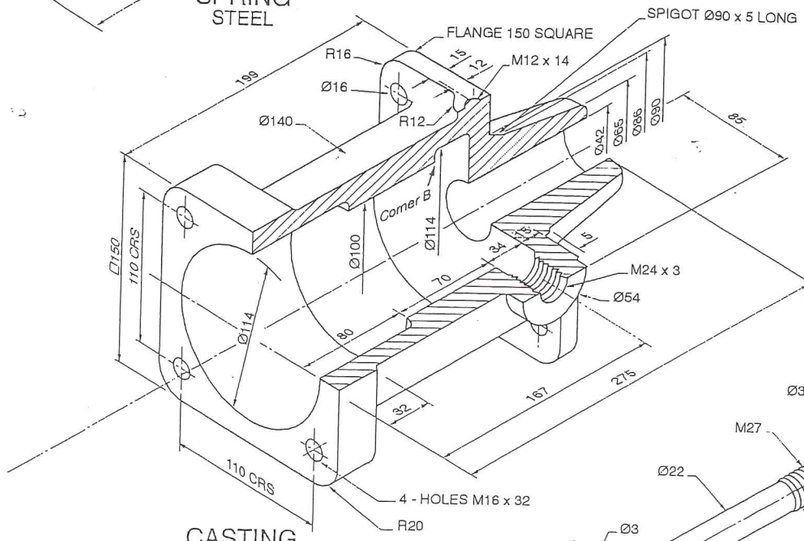
RESETTING
LEVER
STEEL



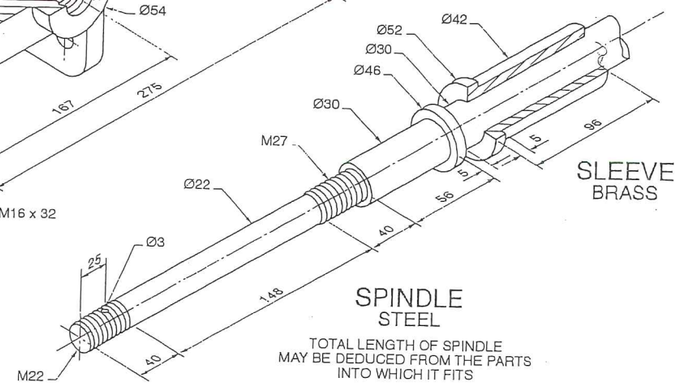
ANY FEATURES UNDIMENSIONED ARE LEFT TO THE
DISCRETION OF THE CANDIDATE



SPRING
STEEL



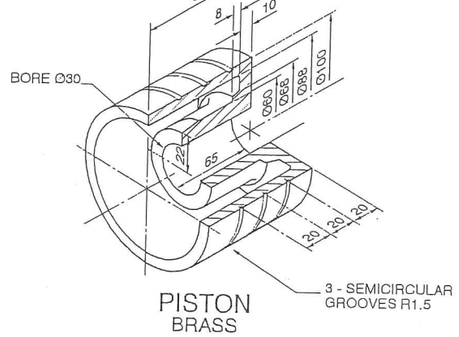
CASTING
BRASS



SLEEVE
BRASS

SPINDLE
STEEL

TOTAL LENGTH OF SPINDLE
MAY BE DEDUCED FROM THE PARTS
INTO WHICH IT FITS



PISTON
BRASS

BALANCE SPRING
PHOSPHOR BRONZE

DIAMETER TO CENTRE OF WIRE 72
FREE LENGTH 180, WIRE Ø4

WHEN THE PISTON IS IN THE BALANCED POSITION
THE LATCH IS HELD BACK BY THE RESETTING LEVER
WHICH PERMITS FREEDOM OF MOVEMENT OF
THE PISTON ASSEMBLY.

OCTOBER 2012	TITLE	
TS042 - 24	LOW LUBRICATING	ISOMETRIC
FIGURE Q1	OIL PRESSURE TRIP	Dim. in mm