INSTITUTE OF OCEANOGRAPHIC SCIENCES
DEACON LABORATORY

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Sonic buoy mechanical design

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ABSTRACT

A Discus 'wave following' buoy was designed as part of the IOS Meteorological Program The Design philosophy adopted for a Discus Buoy is describe, and details of the implementation are discussed. A complete t set of drawings of the hardware as manufactured for the first deployment in the Autumn of 1991 is included for completeness and forms the basis for operational use or development of the system.

The subsequent modifications, that have been implemented todate, are also included in the set of drawings.

KEYWORDS

Sonic Buoy

Solent Sonic Anemometer

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Top Frame
Buoy
Top Ring
Centre Instrument Housing
Young's Wind Monitor
Air Temperature
Buoy Pipe
Assymetric Anemometer Clamp
Top Ring assembly
Flange Tube
Battery Box
Battery Box Lid
Young's Anemometer Clamp
Anchor Frame
Top Ring Clamp

60mm Clamp
Angle-A
Anemometer Base Tube
DCP Antenna Tube Base
Clamp Bolt
JB End Cap-Buoy
JB Tube-Buoy
Temperature Sensor Mounting
Spacer Ring
Bracket
Clamp
Anemometer Extension Tube
Flange
End Cap
Tube
Plate
Tube Xenon
Tube RF Beacon
Body Sea Surface Temperature Sensor
Insulator Air Temperature Sensor
Masthead JB
Masthead JB Lid
Masthead JB Gasket
Top Hat for Connector Series 5
Top Hat for Connector Series 4
Top Hat for Connector Series 3
Anemometer Base Adapter
DCP Base Adapter
Anemometer Tube Adapter Plug
PCB Bracket
Cover for Connector Series 3
Meteosat Box
Meteosat Box Lid
Meteosat Box Gasket
CPU Housing Box
CPU Housing Lid
CPU Housing Gasket
PCB Chassis Side Plate
Base Plate
Top Plate
Bottom Plate
Battery plate - A
Battery plate - B
Argos Mounting Plate
Charger Mounting Plate
Main Frame Pillar
Battery Pillar
Battery Pillar - B
Mounting Plate Pillar
Junction Box
Junction Box Lid
Junction Box Gasket
Main Instrument Housing Lid
PCB Chassis Bar
Compass Housing Body
Compass Housing Cap
Compass Housing Base
Lifting Eye Boss
Compass Bolt
Compass Spacer
Pressure Relief Housing
Body, Air Temperature
Gasket

Gasket
SST End Cap - Top
Top Hat - SST
DCP Antenna Tube Base
Top Hat for Buoy Tube
Lifting Bar Guide
Lifting Bar
Lifting Bar End
Bar
Top Hat Spacer
Fluxgate Mounting Plate
Protector Plate
Board Spacer 1
Board Spacer 2
Board Spacer 3
Board Spacer 4
Inclinometer Spacer
Gyreo Board Spacer
Inclinometer Support 1
Inclinometer Support 2
Anchor Point - A
Anchor Point - B
Spreader Plate
Anchor Point Bush
Anchor Point Washer
Spreader Plate Busb
Spreader Plate Washer
Handle Block
Handle Block Locator
Compass Retainer
Flashing Lamp base
Aerial mounting Plate
Housing for Aerial
Moulded Aerial Assembly

1. OVERVIEW

Blowing over the sea, the wind causes waves and currents. Accurate values of the wind stress are required for sea state forecasting and for forcing computer models of the ocean circulation. As part of this research the JRC Meteorological Team is engaged in a program of wind stress measurements.

The primary sensor used in this program has evolved from a propeller vane to a 'state of the art' Sonic anemometer. However the environment of the measurement is critical, therefore in deployment of the sensor on the measurement platform one must try to place the sensor in the best position to 'see' the turbulent air structure before it is contaminated by the presence of the platform. In the case of a ship this means the sensor is usually mounted on a high mast to windward.

The most well known of the Sonic anemometers is the Kaijo Denki However the development by Gill Instruments of the Solent Sonic anemometer with its lower operating power has allowed the possibility of self-contained battery powered systems. After initial proving trials of the Solent Sonic anemometer on Royal Research Ship Charles Darwin (Yelland,M.J., P.K.Taylor, K.G.Birch, R.W.Pascal, and A.L.Williams, 1991: Evaluation of Solent Sonic Anemometer on RRS Darwin Cruise 43. 288,Institute of Oceanographic Sciences), it was suggested that a buoy mounted measurement system based on this sensor would be viable.

This report outlines the design criteria of the buoy, and details the hardware that was constructed to meet the specification.

Design of this hardware was also a large step for the drawing techniques used, as this was the first project within IOSDL to be designed using a Computer Aided Design package. The flexibility of this technology has enabled the production of this detailed handbook.

2. CONCEPTUAL DESIGN

The criterion for the buoy design was to provide an optimised platform which would provide the best possible exposure of the Solent sonic anemometer.

The Sonic anemometer is manufactured in two different designs, one has three support legs spaced symmetrically at 120 ° spacing and the second is an asymmetrical construction with three legs equispaced within 120 °, i.e. separated by 60 °.

The asymmetric construction was chosen, because of its 240 ° unobstructed window to the airflow. To make best use of the sensor's window it was concluded that minimisation of buoy effects would best realised by placing the sensor on the leading edge of the buoy facing directly into the prevailing wind direction. To achieve this goal it was not considered practical to have a rotating structure mounted on the buoy because of the complexity of connecting the variety of electrical signals to the sensors, navigation aids, and Satellite aerials. The alternative configuration, which was employed, is to have a fixed structure for mounting the sensors and to orientate the buoy by the use of a wind vane.

The other sensors that are deployed on the buoy are :-

Air Temperature

Sea Surface Temperature

Propeller Wind vane anemometer

Also the data transmission aerials and navigational aids need to be deployed on the external structure, these are :-

Argos Transmitter Aerial

Meteosat Transmitter Aerial

Navigation Light

VHF navigation beacon.

2.1 Deployment Life span

The design specification for the deployment life of all the systems was 70 days. This meant that all data recording and power systems must have a life expectancy in excess of this time, to allow for the eventuality that bad weather may not allow recovery to take place on schedule.

The long term durability of the mechanical design needed to consider the problems of the waterproof sealing the equipment and wiring enclosures. To increase the robustness of these areas and prevent water ingress a policy of double sealing was considered appropriate. The implementation of this policy would mean that individual modules within the central canister i.e. Battery packs, processor unit etc., should be in watertight enclosures with waterproof connectors. All external connectors should be waterproof and themselves be covered by individual covers with glands exits for cables.

2.2 Launching and Recovery

High on the design philosophy was the problem of deployment and recovery of the buoy, which is directly linked to the vulnerability of the delicate sensors. The methods of deployment must have the goal of minimising the risk of the buoy overturning during this crucial operation. To achieve this it was concluded that the buoy must be launched, by a crane or 'A" Frame, from a central point at the top of the Tower. Hardware Configuration

3. BUOY IMPLEMENTATION

3.1 Hardware design

A discus buoy hull with quadrapod tower was selected as being the optimum form of construction to meet the sensor and electronic systems requirements. This configuration provided adequate space for the 200kg payload, whilst maintaining a low centre of gravity.

The tower design enabled the sensor annular ring to be of a rigid construction, minimising vibration, and provided a means of access to the sensors for servicing whilst the buoy was deployed.

The central core of the buoy hull is fabricated in aluminium, with a 'cotton reel' cross section, to which is bonded a 3 M diameter flotation collar. A 15mm elastomer coating is applied over the flotation collar to provide protection and a non slip upper deck surface.

The tower is bolted to the hull via pads which are welded to the top surface of the central 'cotton reel'. Adjacent to each of the four tower legs are tubes bonded vertically through the floatation collar to allow sensors to be mounted through the hull into the near surface water.

The instrumentation canister, which is mounted within the central 'cotton reel', contains the (multi)processor unit, satellite transmitters, compass, DC-DC Converters and six lithium battery packs. Each individual unit is housed in a waterproof housing, connected by inter-unit cables with sealed environmental connectors, giving a high degree of protection against water ingress.

The sensors, satellite aerials, and navigational aids are mounted on the 1.5m diameter ring on the top of the quadrapod tower. Each of the devices is fitted with a quick release clamp to facilitate easy replacement, whilst the buoy is deployed, in event of failure or damage. External cabling on the tower is minimised by use of a single multi-core cable for all sensor signals. This cable connects between the central instrument housing and a mast head junction box.

Orientation of the buoy into the wind is by dual vanes mounted on one of the tower legs. The vanes are of a wedge cross section, extending from deck level to the underside of the tower annular instrumentation ring.

The technique of launching from the central point at the top of the Tower would require the heavy lifting mechanism to be position within the ring of sensors and aerials at the moment of release from the ship This raised the high possibility of damage to any of the sensors and aerials. To remove the lifting mechanism from this hazardous area a retractable deployment bar was incorporated into the design. The retractable lifting bar, which is 1 M long, is mounted at the top of the tower with four lifting strops, made of polyprop rope, shackled to the central buoy flotation unit. Under load, whilst the buoy is being deployed the bar slides upwards to the maximum extension as determined by the length of the strops. At the instant that buoy is released, from the lifting mechanism, the bar slides downwards under gravity out of the sensor area. This technique allows a higher chance of deployment without damage and once deployed does not cause an obstruction to wind flow over the sensors.

3.2 Power Supplies

The power for all the buoy systems is provided from up to six battery housings each containing two 24V,125 Ampere-Hour packs. A power bus is generated by connecting the battery packs in parallel, using Schottky diodes, enabling the efficient use of battery power and flexibility in deployment duration.

Each of the Systems is powered via dedicated DC to DC converters. By the provision of power supply isolation between sub systems, the overall system reliability is enhanced by minimising the risks to all systems caused by a failure in one component area.

We would like to acknowledge the financial support provided by ARE Portland, and the advice from Mark Carson with respect to the overall Buoy design and buoyancy materials of the hull.

4. RESULTS FROM THE FIRST DEPLOYMENT

The first scientific deployment of was from the Royal Research Ship Charles Darwin during a cruise to the Faeroes area during september 1991. the buoy was launched in good conditions without damage to any of the instrumentation The wind speed was about 8m/s which steadily increased to 15m/s during the day. At first light the following morning the buoy was found to be overturned and was recovered. Damage to the hull and tower structure was minimal but highlighted the well known problem of stability of a Discus buoy.

4.1 Buoy Modelling Tests

As part of the original buoy design Computer Modelling was carried out to check the viability of the design. The figures which were used for this work was based on estimated design dimensions and weights. Subsequent to the first deployment the implemented design was found to be significantly higher in weight and therefore the original modelling was not representative of the constructed buoy. Further analytical work was carried out, running the Computer Model with the actual buoy dimensions and weights. This showed that ,as had happened in practice, the buoy would capsize in the conditions experienced on the first deployment. This was good because it confirmed our faith in the predictions of the Modelling.

Alterations were suggested to :-

1) increase the freeboard and diameter of the buoyancy

2) reduce the turning moment about the centre of buoyancy by the reduction of weight ,where possible, on the tower and sensor clamps.

The changed design was re-run on the Computer Model and showed significant improvements in stability.

5. BUOY SPECIFICATION

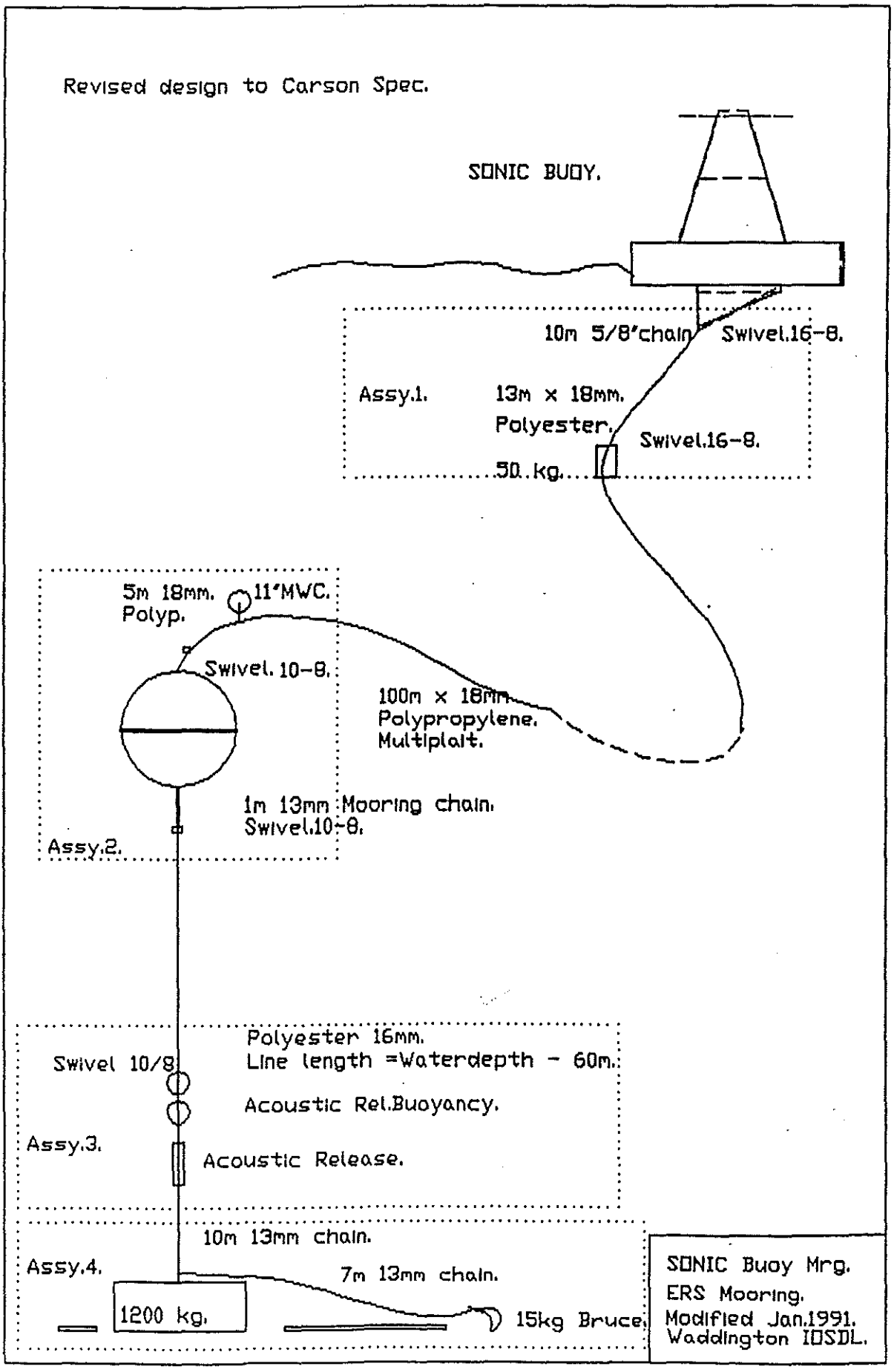
5.1 Mechanical Hardware Specification

Diameter	3 Metres
Overall height	3.8 Metres - including sensors
Height above waterline	2.5 Metres to annular ring 3.3 Metres to top of sensors
Weight in air	938 Kg
Weight Tower + Clamps+ Junction Box+ Lifting Bar	108 Kg
Hull with Central Cannister	620 Kg
Hull with Central Cannister + contents	830 Kg

5.2 Payload

	Weight	Capacity
Battery Pack(s) Flashing Light BatteryPack	23 Kg per housing 15Kg	Two 24V ,125 Ampere hours per housing 18V, 112 Ampere hours
Electronic Systems	8 Kg	MultiMet Sonic DSP PC Formatter DSP PC
Transmitter Box	28Kg	Argos/Meteosat
Buoy Motion Monitor	12 Kg	BMP DSP PC

5.3 Mooring Design



5.4 Electronic Systems specification

5.4.1 Mean Meteorological Measurements - MultiMet.

RCA Mircoboard CD1802 BCE, with 8Mb Eprom data storage
Sampling frequency - 1 Hz
Processing - Calculating '1 Min ute' means

Sensors	System Measurements	Number	Manufacturer
Air temperature	Range 0 - 35 °C Accuarcy 0.1°C Resolution ±0.005 °C	2 off	IOS
Sea Surface Temperature	Range 0 - 35 °C Accuracy 0.1 °C Resolution ±0.005	2 off	IOS
Wind Speed &	Range 0-40 m/sec Accuracy 0.1m/sec Resolution 0.001m/sec	2 Off	R.M.Young
Direction	Range 0 - 355 ° Accuracy 0.08 ° Resolution		
Compass	Range 0-360 ° Resolution 1.387 °	1 Off	DigiCourse

5.4.2 Wind Stress system.

Single Board DSP 286 with 8M Bytes Eprom data storage
Sampling Frequency - 21 Hz
Processing - 15 Section s of 1024 points, using software FFT to compute Wind Speed Spectrum

Sensors	Solent Sonic Anemometer Range 0 - 60 M/sec Accuracy <30m/sec ±1.5%, >30m/sec ± 3%	1 Off	Gill Research
	Compass Range 0-360° Resolution 1.387	1 Off	DigiCourse

5.4.3 Satellite Data Formatter to Argos & Meteosat.

Single Board DSP GCAT with 4M Bytes Flash Eprom data storage on PCMCIA Card
Continuously monitors output data streams from MultiMet and Wind Stress systems.
Processing - Averages '1 minute Mean' MultiMet datasets over period corresponding to Sampling period of Wind Stress . Formats data in preparation for sending via Argos and Meteosat

Argos		1 Off	Argos/WS Oceans
	Position Accuracy		
	Data Transmission rate ~ 4hrs (satellite visibilty dependant)		
	Data capacity 32 bytes * 8 (Multiplexed over 8 consecutive transmissions)		
Meteosat	DCP	1 Off	Hays Space Technology
	Data Transmission Rate, Hourly		
	Data capacity 256 Bytes		

5.4.4 Buoy Motion Analysis System.

Sensors	3 Components Accelerometer	1 Off	SE Systems AMD
	Solid State Rate Gyro	3 Off	Murata Gyrostars
	Pitch Inclinometers	1 Off	Penny & Giles
	Roll Inclinometers	1 Off	Penny & Giles
	3 Axis fluxgate compass	1 Off	Thorn EMI
	Wind Speed&Direction	1 Off	RM Young

Single Board DSP GCAT with 4M BytesFlash Eprom data storage on PCMCIA Card
Sampling Frequency - 4 Hz
Processing - The initiation of a record would be determined by whether any of the following criteria were satisfied :-

Wind Speed	Number of (10 min) Records
0 - 5 m/s Mean Wind speed	5
5-10 m/s Mean Wind speed	5
10-15 m/s Mean Wind speed	10
15-20 m/s Mean Wind speed	10
>20 m/s Mean Wind speed	20

DETAIL No	PARTS TO MANUFACTURE DRAWING TITLE	MATERIAL	FINISH	No OFF PER UNIT	 TOTAL	REMARKS
1	TOP FRAME	ALUMINIUM ALLOY		1		
2	BUOY	POLYETHYLENE FOAM & GRP		1		
3						
4	TOP RING	ALUMINIUM ALLOY		1		SEE DRAWING IOS 5295/3
5	CENTRE INSTRUMENT HOUSING	ALUMINIUM ALLOY		1		
6	YOUNG'S WIND MONITOR	VARIOUS		2		OUTLINE DRAWING
7	AIR TEMPERATURE PROBE	VARIOUS		2		OUTLINE DRAWING
8						
9						
10	BUOY PIPE	ALUMINIUM ALLOY		4		
11						
12						
13	ASSYMETRIC ANEMOMETER CLAMP	ALUMINIUM ALLOY		1		
14	TOP RING ASSEMBLY	VARIOUS		1		
15						
16						
17	FLANGE TUBE	ALUMINIUM ALLOY		1		
18						
19	BATTERY BOX	ALUMINIUM ALLOY		6		
20	BATTERY BOX LID	ALUMINIUM ALLOY		6		
21	YOUNG'S ANEMOMETER CLAMP	ALUMINIUM ALLOY		2		
22	ANCHOR FRAME	MILD STEEL		1		
23	TOP RING CLAMP	ALUMINIUM ALLOY		8		
24						
25	60mm CLAMP	ALUMINIUM ALLOY		2		

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1	5-1-83	NEW LIST	4			7			10		
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3			6			9			12		

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TITLE

SONIC BUOY ASSEMBLY

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DETAIL No	PARTS TO MANUFACTURE DRAWING TITLE	MATERIAL	FINISH	No OFF PER UNIT	 TOTAL	REMARKS
26	ANGLE–A	ALUMINIUM ALLOY		3		
27	ANEMOMETER BASE TUBE	ALUMINIUM ALLOY		1		
28	DCP ANTENNA TUBE BASE	ALUMINIUM ALLOY		2		
29	CLAMP BOLT	STAINLESS STEEL		12		
30	JB END CAP–BUOY	ALUMINIUM ALLOY		4		
31	JB TUBE–BUOY	ALUMINIUM ALLOY		4		
32	TEMPERATURE SENSOR MOUNTING	ALUMINIUM ALLOY		2		
33	SPACER RING	RIGID PVC		2		
34	BRACKET	ALUMINIUM ALLOY		1		
35	CLAMP	ALUMINIUM ALLOY		2		
36						
37						
38	ANEMOMETER EXTENSION TUBE	ALUMINIUM ALLOY		2		
39	FLANGE	ALUMINIUM ALLOY		2		
40	END CAP	ALUMINIUM ALLOY		2		
41	TUBE	ALUMINIUM ALLOY		2		
42	PLATE	ALUMINIUM ALLOY		2		
43	TUBE XENON	ALUMINIUM ALLOY		1		
44	TUBE RF BEACON	ALUMINIUM ALLOY		1		
45	BODY SEA TEMPERATURE SENSOR	STAINLESS STEEL		2		
46	INSULATOR AIR TEMPERATURE SENSOR	NYLATRON		2		
47	MASTHEAD JB	ALUMINIUM ALLOY		1		
48	MASTHEAD JB LID	ALUMINIUM ALLOY		1		
49	MASTHEAD JB GASKET	SYNTHETIC RUBBER		1		
50	TOP HAT FOR CONNECTOR SERIES 5	POLYPROPYLENE		1		

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DETAIL No	PARTS TO MANUFACTURE DRAWING TITLE	MATERIAL	FINISH	No OFF PER UNIT	 TOTAL	REMARKS
76	BATTERY PILLAR–B	ALUMINIUM ALLOY		2		
77	MOUNTING PLATE PILLAR	ALUMINIUM ALLOY		8		
78	JUNCTION BOX	ALUMINIUM ALLOY		1		
79	JUNCTION BOX LID	ALUMINIUM ALLOY		1		
80	JUNCTION BOX GASKET	NEOPRENE		2		
81	MAIN INSTRUMENT HOUSING LID	ALUMINIUM ALLOY		1		
82	PCB CHASSIS BAR	ALUMINIUM ALLOY		4		
83	COMPASS HOUSING BODY	ALUMINIUM ALLOY		1		
84	COMPASS HOUSING CAP	ALUMINIUM ALLOY		1		
85	COMPASS HOUSING BASE	ALUMINIUM ALLOY		1		
86	LIFTING EYE BOSS	ALUMINIUM ALLOY		4		
87	COMPASS BOLT	STAINLESS STEEL		4		
88	COMPASS SPACER	RIGID PVC		12		
89	PRESSURE RELIEF HOUSING	ALUMINIUM ALLOY		1		
90	BODY, AIR TEMPERATURE	STAINLESS STEEL		2		
91	GASKET	SYNTHETIC RUBBER		1		
92	GASKET	SYNTHETIC RUBBER		2		
93						
94	SST END CAP–TOP	ALUMINIUM ALLOY		1		
95						
96	TOP HAT–SST	POLYPROPYLENE		1		
97	DCP ANTENNA TUBE BASE	ALUMINIUM ALLOY		2		
98						
99						
100	TOP HAT FOR BUOY TUBE	POLYPROPYLENE		2		

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1	6–1–93	NEW LIST	4			7			10		
2			5			8			11		
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SHEET No. 4 OF

SEPTEMBER AUGUST 1991

PARTS TO MANUFACTURE		MATERIAL	FINISH	No OFF		REMARKS
DETAIL No	DRAWING TITLE			PER UNIT	TOTAL	
51	TOP HAT FOR CONNECTOR SERIES 4	POLYPROPYLENE		2		
52	TOP HAT FOR CONNECTOR SERIES 3	POLYPROPYLENE		2		
53	ANEMOMETER BASE ADAPTER	ALUMINIUM ALLOY		1		
54	DCPA BASE ADAPTER	ALUMINIUM ALLOY		2		
55	ANEMOMETER TUBE ADAPTER PLUG	ALUMINIUM ALLOY		2		
56	PCB BRACKET	ALUMINIUM ALLOY		1		
57	COVER FOR CONNECTOR SERIES 3	POLYPROPYLENE		1		
58						
59						
60	METEOSAT BOX	ALUMINIUM ALLOY		1		
61	METEOSAT BOX LID	ALUMINIUM ALLOY		1		
62	METEOSAT BOX GASKET	NEOPRENE		1		
63	CPU HOUSING BOX	ALUMINIUM ALLOY		1		
64	CPU HOUSING LID	ALUMINIUM ALLOY		1		
65	CPU HOUSING GASKET	NEOPRENE		1		
66	PCB CHASSIS SIDE PLATE	ALUMINIUM ALLOY		2		
67	BASE PLATE	ALUMINIUM ALLOY		1		
68	TOP PLATE	ALUMINIUM ALLOY		1		
69	BOTTOM PLATE	ALUMINIUM ALLOY		1		
70	BATTERY PLATE-A	RIGID PVC		1		
71	BATTERY PLATE-B	RIGID PVC		1		
72	ARGOS MOUNTING PLATE	RIGID PVC		1		
73	CHARGER MOUNTING PLATE	RIGID PVC		1		
74	MAIN FRAME PILLAR	ALUMINIUM ALLOY		2		
75	BATTERY PILLAR-A	ALUMINIUM ALLOY		2		

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DETAIL No	PARTS TO MANUFACTURE DRAWING TITLE	MATERIAL	FINISH	No OFF PER UNIT	 TOTAL	REMARKS
101	LIFTING BAR GUIDE	ALUMINIUM ALLOY		1		
102	LIFTING BAR	STAINLESS STEEL		1		
103	LIFTING BAR END	STAINLESS STEEL		2		
104	BAR	STAINLESS STEEL		2		
105	TOP HAT SPACER	POLYPROPYLENE		2		
106	FLUXGATE MOUNTING PLATE	ALUMINIUM ALLOY		1		
107	PROTECTOR PLATE	RIGID PVC		1		
108	BOARD SPACER 1	ALUMINIUM ALLOY		3		
109	BOARD SPACER 2	ALUMINIUM ALLOY		3		
110	BOARD SPACER 3	ALUMINIUM ALLOY		3		
111	BOARD SPACER 4	ALUMINIUM ALLOY		3		
112	INCLINOMETER SPACER	ALUMINIUM ALLOY		3		
113	GYRO BOARD SPACER	ALUMINIUM ALLOY		4		
114	INCLINOMETER SUPPORT 1	ALUMINIUM ALLOY		1		
115	INCLINOMETER SUPPORT 2	ALUMINIUM ALLOY		1		
116	ANCHOR POINT-A	MILD STEEL		1		
117	ANCHOR POINT-B	MILD STEEL		1		
118	SPREADER PLATE	MILD STEEL		1		
119	ANCHOR POINT BUSH	POLYPROPYLENE		2		
120	ANCHOR POINT WASHER	POLYPROPYLENE		2		
121	SPREADER PLATE BUSH	POLYPROPYLENE		3		
122	SPREADER PLATE WASHER	POLYPROPYLENE		3		
123	HANDLE BLOCK	POLYPROPYLENE		1		
124	HANDLE BLOCK LOCATER	POLYPROPYLENE		1		
125	COMPASS RETAINER	POLYPROPYLENE		1		

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WORKSHOP DETAIL LIST FOR

C. 5597

COMPILED BY N. DUNNING

SHEET No. 5 OF

PARTS TO MANUFACTURE		MATERIAL	FINISH	No OFF		REMARKS
DETAIL No	DRAWING TITLE			PER UNIT	TOTAL	
126	FLASHING LAMP BASE	POLYPROPYLENE		1		
127	AERIAL MOUNTING PLATE	ALUMINIUM ALLOY		1		
128	HOUSING FOR AERIAL	NYLATRON		1		
129	MOULDED AERIAL ASSEMBLY	POLYPROPYLENE		1		
130						
131						
132						
133						
134						
135						
136						
137						
138						
139						
140						
141						
142						
143						
144						
145						
146						
147						
148						
149						
150						

ISSUE No	DATE	REMARKS	ISSUE No	DATE	REMARKS	ISSUE No	DATE	REMARKS	ISSUE No	DATE	REMARKS
1	2-2-93	NEW LIST	4			7			10		
2			5			8			11		
3			6			9			12		

INSTITUTE OF OCEANOGRAPHIC SCIENCES–DEACON LABORATORY

WORMLEY, GODALMING, SURREY, GU8 5UB

TITLE

SONIC BUOY ASSEMBLY

WORKSHOP DETAIL LIST FOR

C. 5597

COMPILED BY N. Timmins

SHEET No. 6 OF

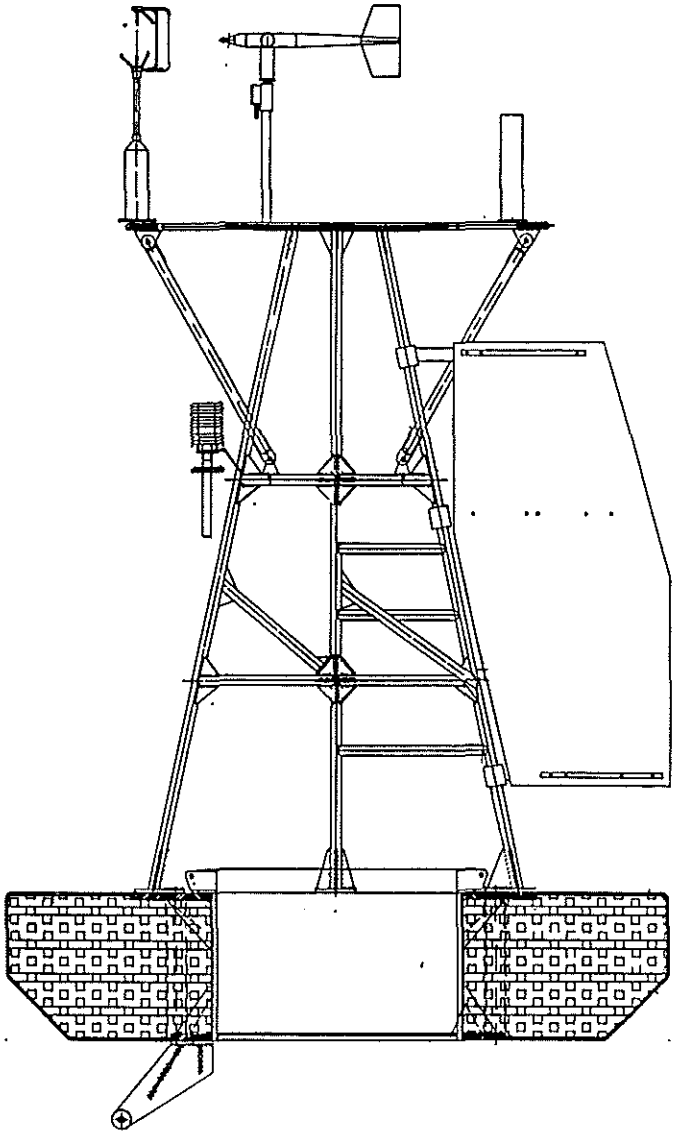
6.2 Drawings

DRAWING No. I.O.S./C5597 DETAIL G.A.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



SIDE ELEVATION.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

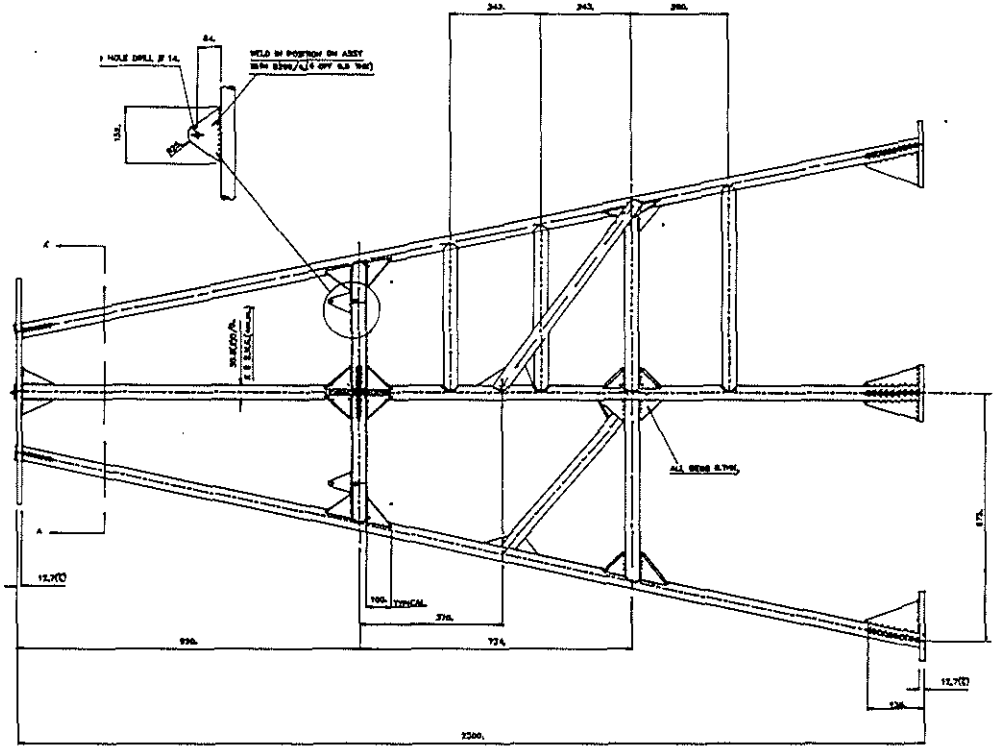
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1m.m.							
CHECKED	VARIOUS.		.X = ± .4m m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE	
TRACED							CORRECTED	1.	2/1/93	
	No.OFF PER UNIT 1.	TOTAL No.OFF	.XX = ± .1m.m.	INSTITUTE OF OCEANOGRAPHIC SCIENCES						
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE N.T.S.	DO NOT SCALE	TITLE SONIC BUOY.				DRAWING No. I.O.S./C5597		DETAIL G.A.
SIZE B										

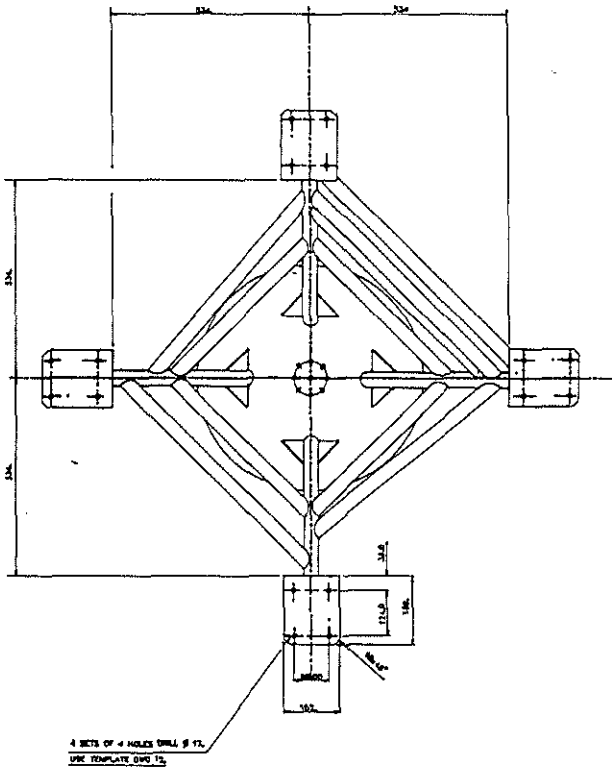
DRAWING No. I.O.S./C5397 DETAIL 1.

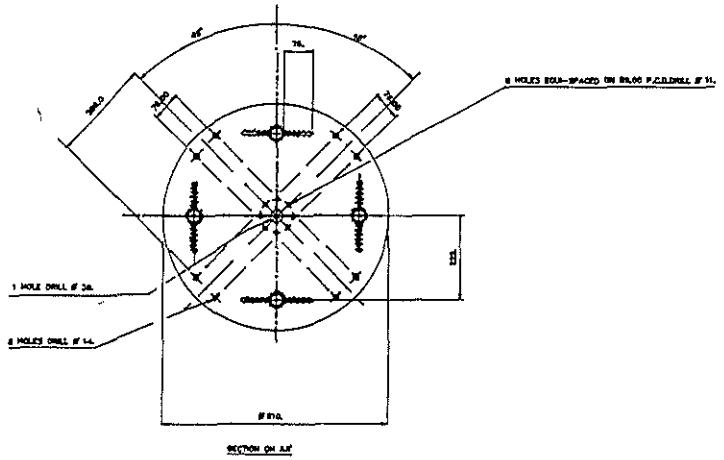
THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON







WELD WHERE THUS ▷◁

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

MATERIAL Al ALLOY HE-30-WP.	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED +/- 1mm. 1mm/-1mm. 2mm/-1mm.				2 DIAGONAL BARS ADDED, TO REPLACE WASTE BARS, BOTTOM STEP REMOVED.	2	21-6-91
No.OFF PER UNIT 1.	TOTAL No.OFF		AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
DIMENSIONS IN m/m.	SCALE N.T.S.	DO NOT SCALE				CERTIFIED 1		4-12-90

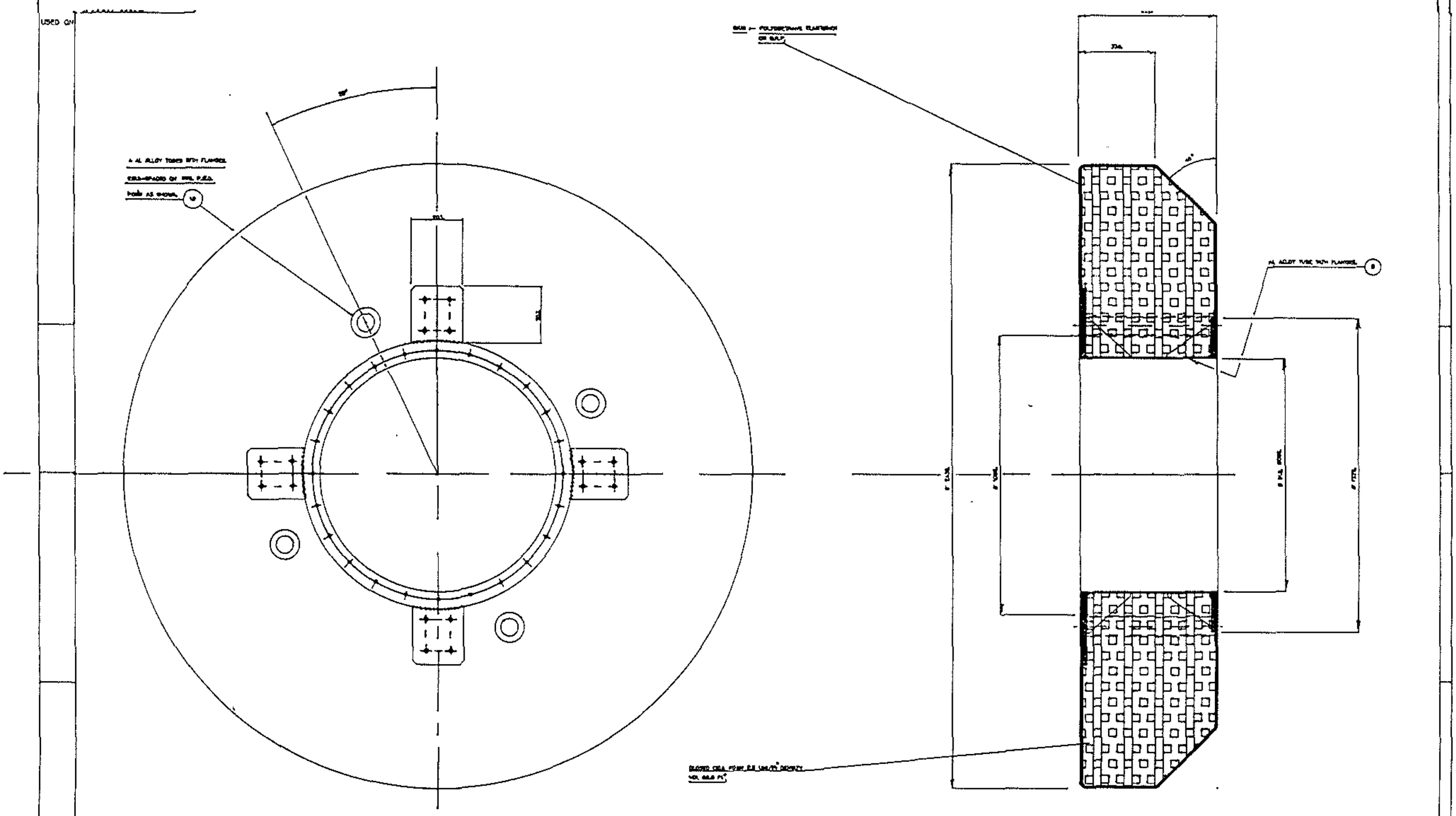
INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE TOP FRAME. DRAWING No. I.O.S./C5397 DETAIL 1

D/No. 9/8
CHECKED
TRACED
DRAWN

SIZE A

USED ON

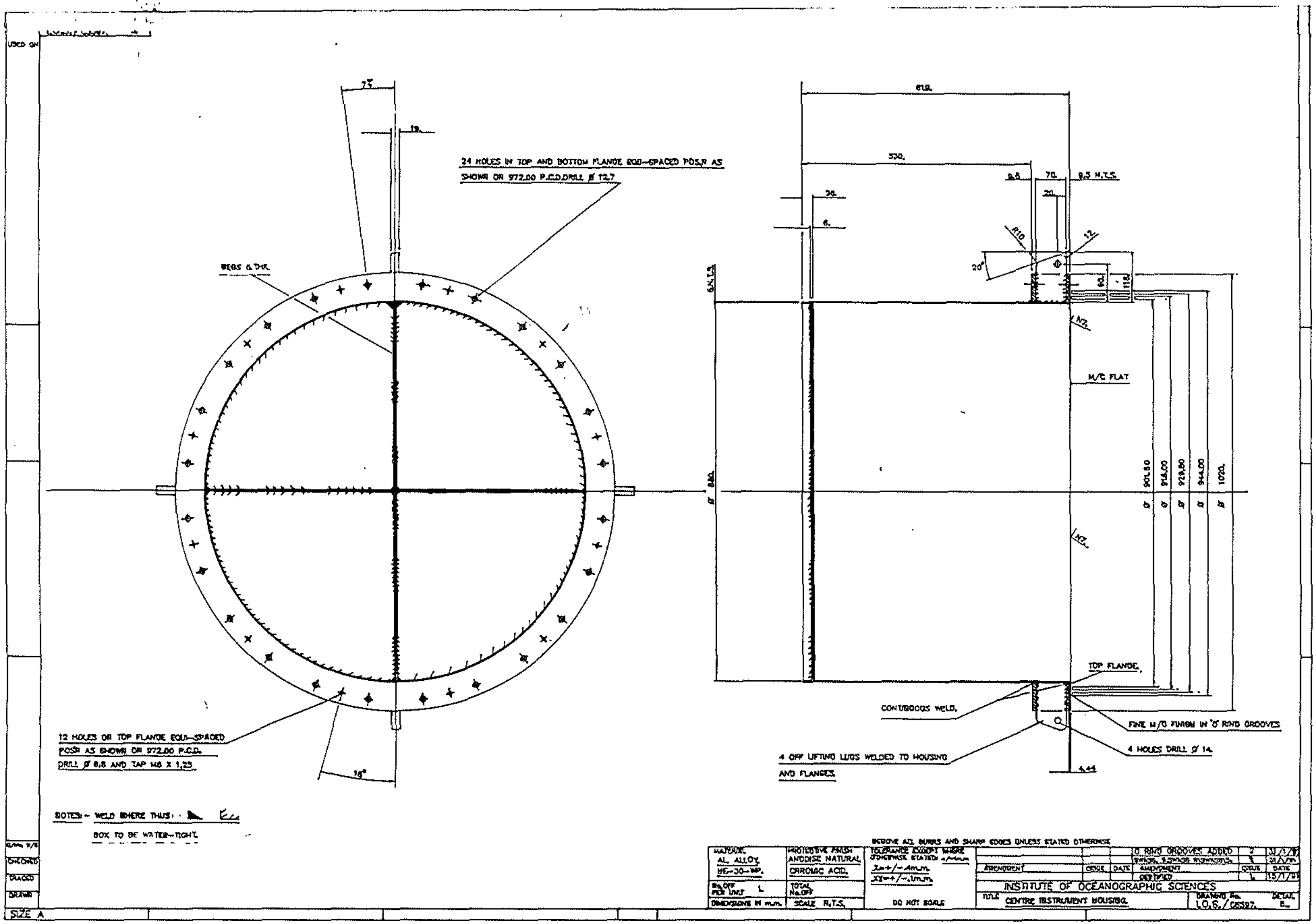


NOTES :- STATIC LOAD THRO' AL ALLOY CENTRE TUBE — 1000 Lbs.
LIVE LOADING . . . . . — 2000 Lbs.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

MATERIAL SEE NOTES.	PROTECTIVE FINISH TOP SURFACE OF BODY TO BE NON-SLIP.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/- mm. .Xmm/-mm. .XXmm/-mm.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
						CERTIFIED	1	3-11-81
No. OFF PER UNIT 1	TOTAL No. OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DIMENSIONS IN mm.	SCALE N.T.S.	DO NOT SCALE	TITLE BUOY.			DRAWING No. I.O.S./		DETAIL 2

O/No. F/S
CHECKED
TRACED
DRAWN
SIZE A

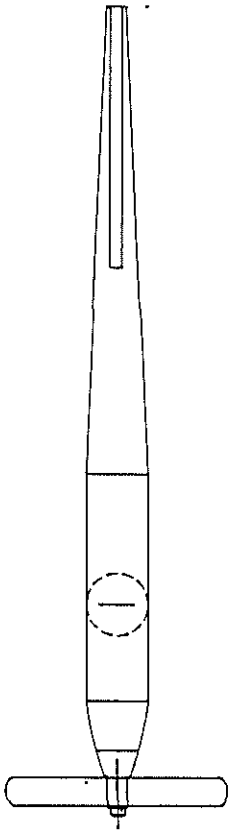

24 HOLES IN TOP AND BOTTOM FLANGE EQU-SPACED POS,N AS SHOWN ON 972.00 P.C.D.DRILL Ø 12.7
WEBS & DR.
12 HOLES ON TOP FLANGE EQU-SPACED POS,N AS SHOWN ON 972.00 P.C.D. DRILL Ø 8.8 AND TAP M8 X 1.25
NOTES:- WELD WHERE THUS:
BOX TO BE WATER-TIGHT.
M/C FLAT
TOP FLANGE.
CONTINUOUS WELD.
FINE M/C FINISH IN 'O' RING GROOVES
4 HOLES DRILL Ø 14.
4 OFF LIFTING LUGS WELDED TO HOUSING AND FLANGES.
Ø 880.
Ø 901.80
Ø 916.00
Ø 929.80
Ø 944.00
Ø 1020.
619.
530.
MATERIAL AL. ALLOY. HE-30-WP.
PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.
REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE
DO NOT SCALE
SCALE N.T.S.
DIMENSIONS IN m.m.
O RING GROOVES ADDED
INSTITUTE OF OCEANOGRAPHIC SCIENCES
TITLE CENTRE INSTRUMENT HOUSING.
I.O.S./C6527.
SIZE A

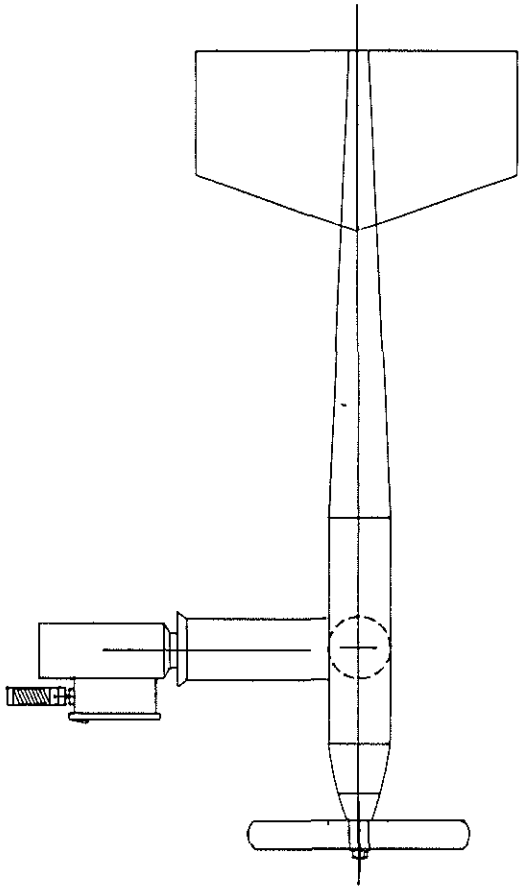
DRAWING No.	DETAIL
I.O.S./C5597	6.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON





REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

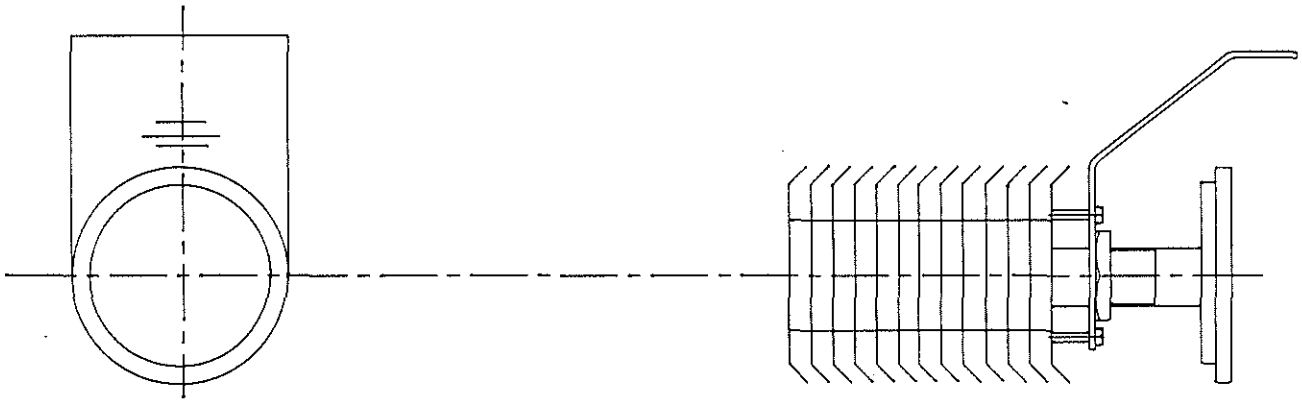
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:					
CHECKED	VARIOUS.							
TRACED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT	TOTAL No.OFF					CERTIFIED	1	6/9/91
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE N.T.S.	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE C				TITLE YOUNG,S WIND MONITOR.			DRAWING No. I.O.S./C5597		DETAIL 6.

DRAWING No. I.O.S./C5597 DETAIL 7.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

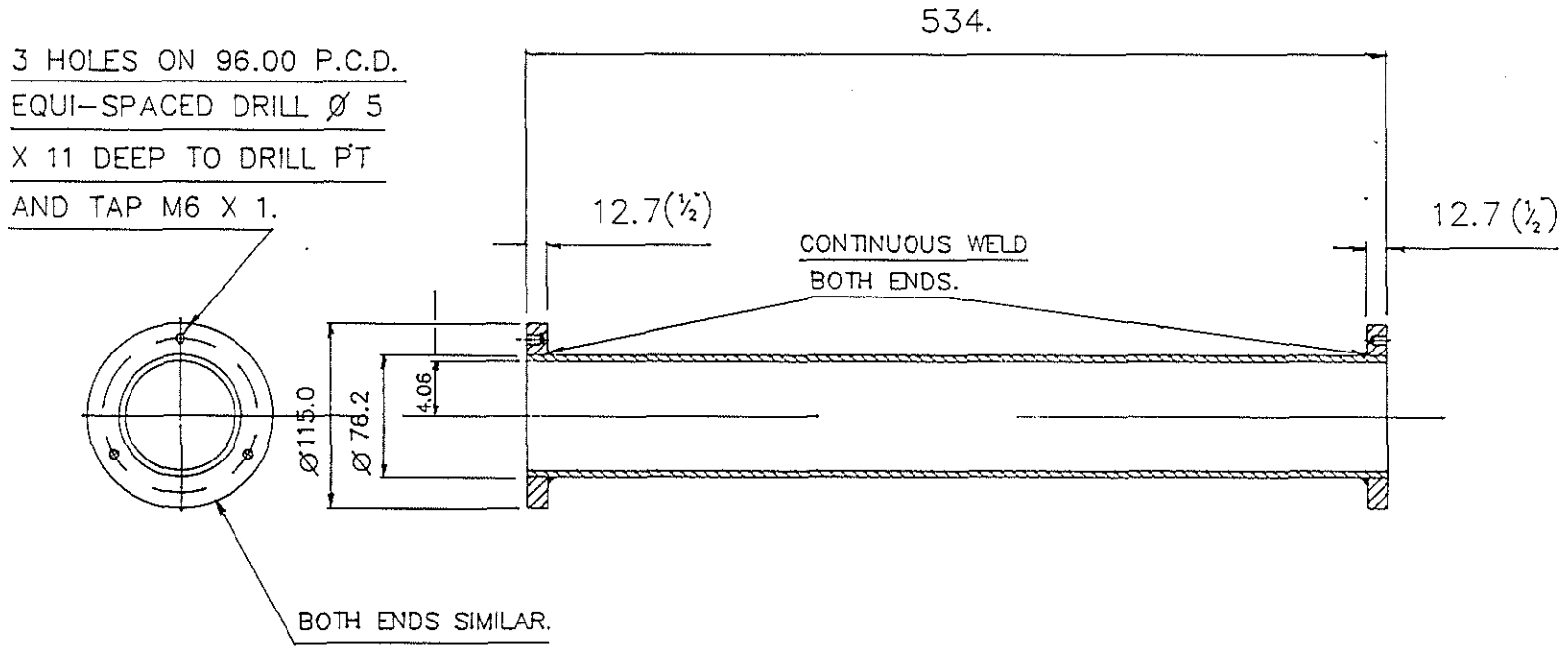
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:						
CHECKED	VARIOUS.								
TRACED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT	TOTAL No.OFF					CERTIFIED	1	6/9/81
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE N.T.S.	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE C				TITLE AIR TEMPERATURE PROBE.			DRAWING No. I.O.S./C5597		DETAIL 7.

DRAWING No.	DETAIL
I.O.S./C5597	10

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

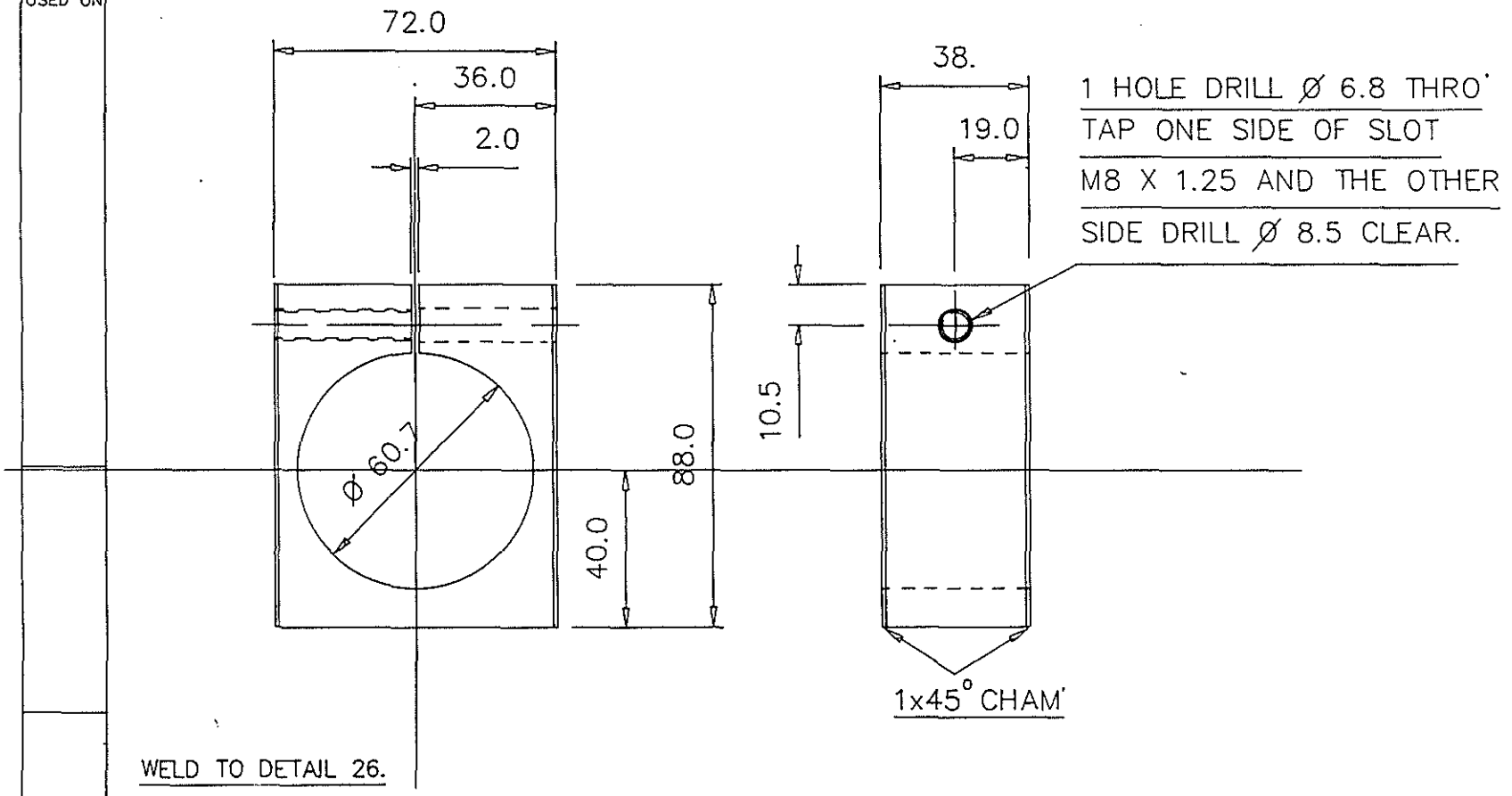
O/No. W/S	MATERIAL AL.ALLOY. HT-30-WP. HP-30-WP.	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. .X=+/-.4m.m. .XX=+/-.1m.m.				96.00WAS115.00	2	4/2/91
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 4.	TOTAL No.OFF					CERTIFIED	1	9/12/90
DRAWN	DIMENSIONS IN m.m.	SCALE N.T.S.	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE D				TITLE BUOY PIPE.			DRAWING No. I.O.S./C5597	DETAIL 10.	

DRAWING No. I.O.S./C5597. DETAIL 13.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL AL.ALLOY. HE-30-WP.	PROTECTIVE FINISH SEE DETAIL 26	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. .X=+/-.4m.m. .XX=+/-.1m.m. DO NOT SCALE	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
CHECKED							CERTIFIED	1	17/12/90.
TRACED	No.OFF PER UNIT 1.	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN	DIMENSIONS IN m.m.	SCALE N.T.S.		TITLE ASSYMETRIC ANEMOMETER CLAMP.			DRAWING No. I.O.S./C5597.		DETAIL 13.

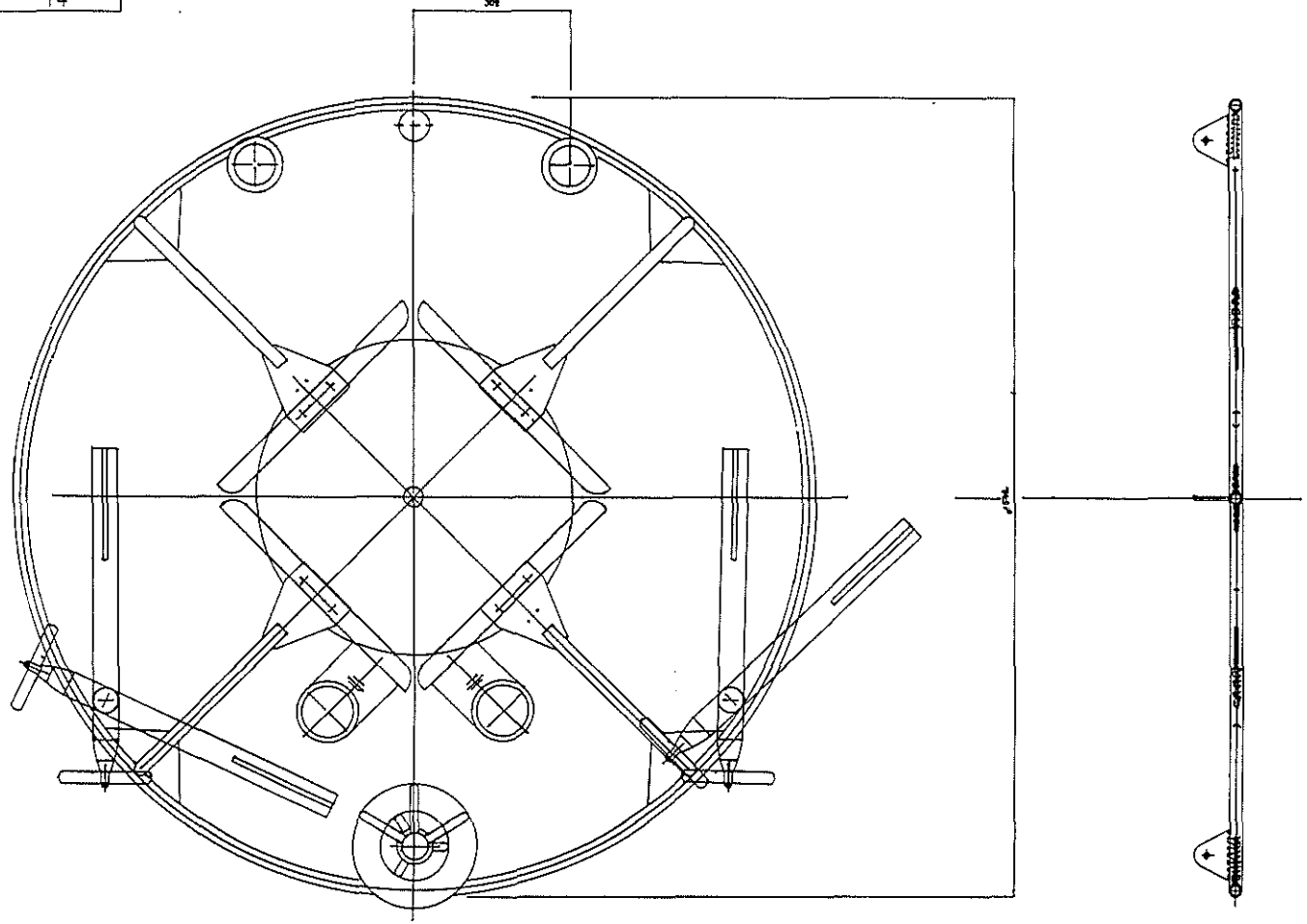
SIZE D

DRAWING No.	DETAIL
I.O.S./ C5597	14

THIRD ANGLE PROJECTION

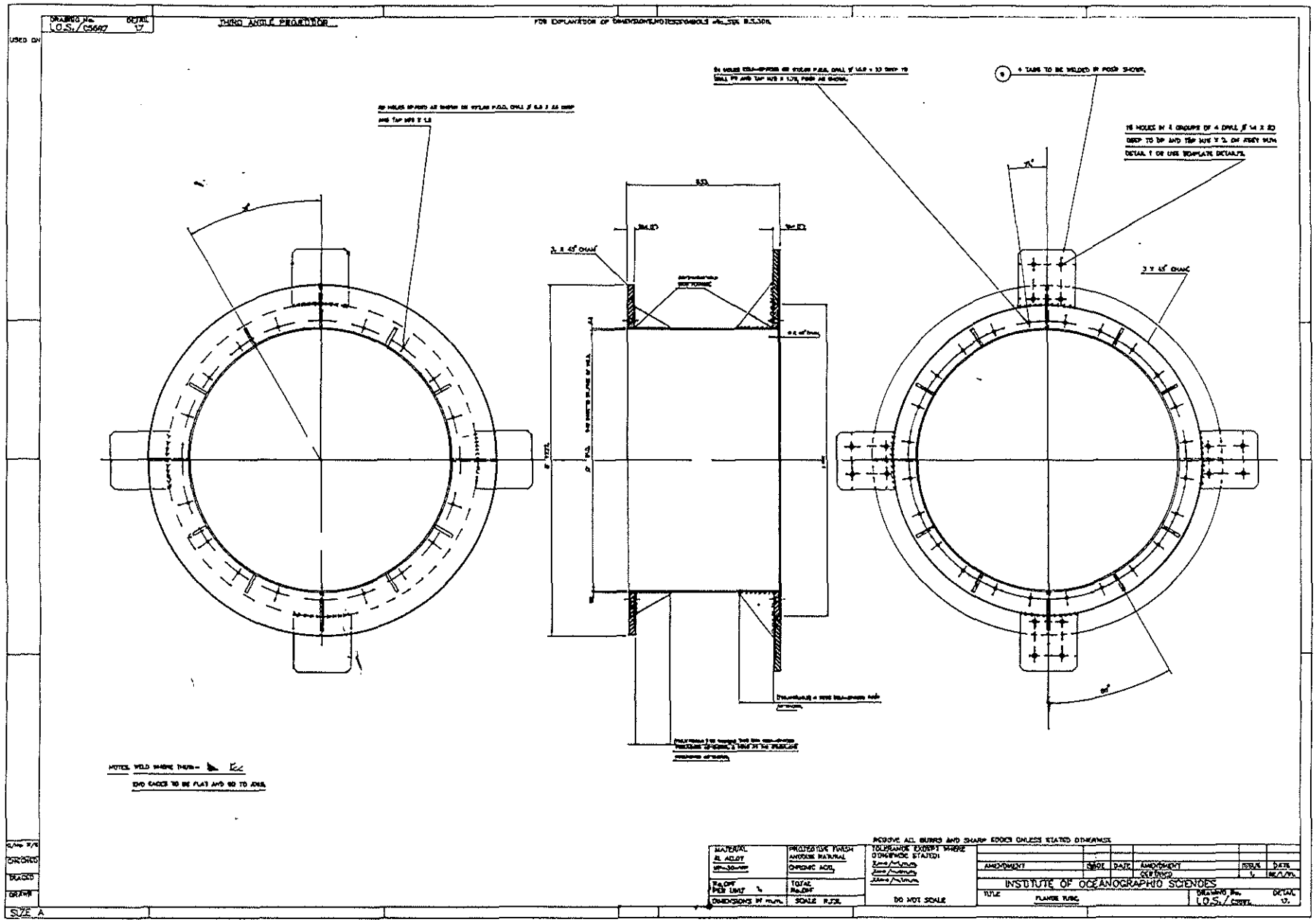
FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON

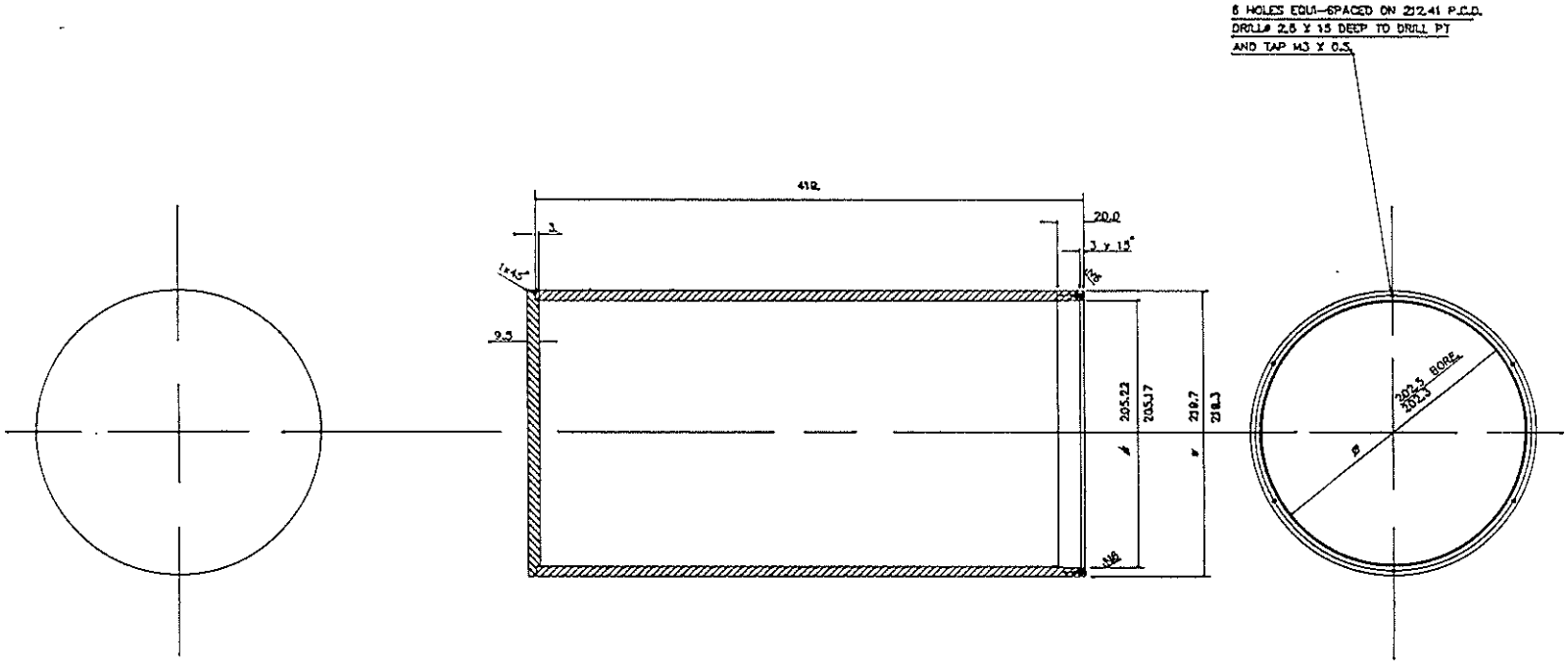


REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:						
CHECKED	VARIOUS.			AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1.	6/9/91
	No.OFF PER UNIT	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE N.T.S.	DO NOT SCALE	TITLE TOP RING ASSY.				DRAWING No. I.O.S./ C5597	DETAIL 14
SIZE C									


DRAWING No. O.S./C5697 DETAIL 17
THIRD ANGLE PROJECTION
USED ON
FOR EXPLANATION OF DIMENSIONING & TOLERANCING SYMBOLS SEE B.S.308.
16 HOLES IN 4 GROUPS OF 4 DRILL Ø 14 X 20 DEEP TO TAP AND TAP M16 X 2 ON JOINT FACE
DETAIL 1 OF LIFE TEMPLATE DETAILS.
4 TABS TO BE WELDED IN POSN SHOWN.
3 X 45° CHAM
NOTICE WELD SHRINK THUS-
END FACES TO BE FLAT AND NO TO AXIS.
REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE
MATERIAL
AL ALLOY
WT=30 LBS
FINISH
PROTECTIVE FINISH
ANODISE NATURAL
CHROMIC ACID
WEIGHT PER UNIT
TOTAL WEIGHT
DIMENSIONS IN m/m.
SCALE F.S.R.
TOLERANCE EXCEPT WHERE OTHERWISE STATED
DO NOT SCALE
AMENDMENT
DRGR.
DATE
AMENDMENT
ISSUE
DATE
CHECKED
INSTITUTE OF OCEANOGRAPHIC SCIENCES
TITLE
FLANGE TUBE
DRAWING No.
O.S./C5697
DETAIL
17
SIZE A

USED ON

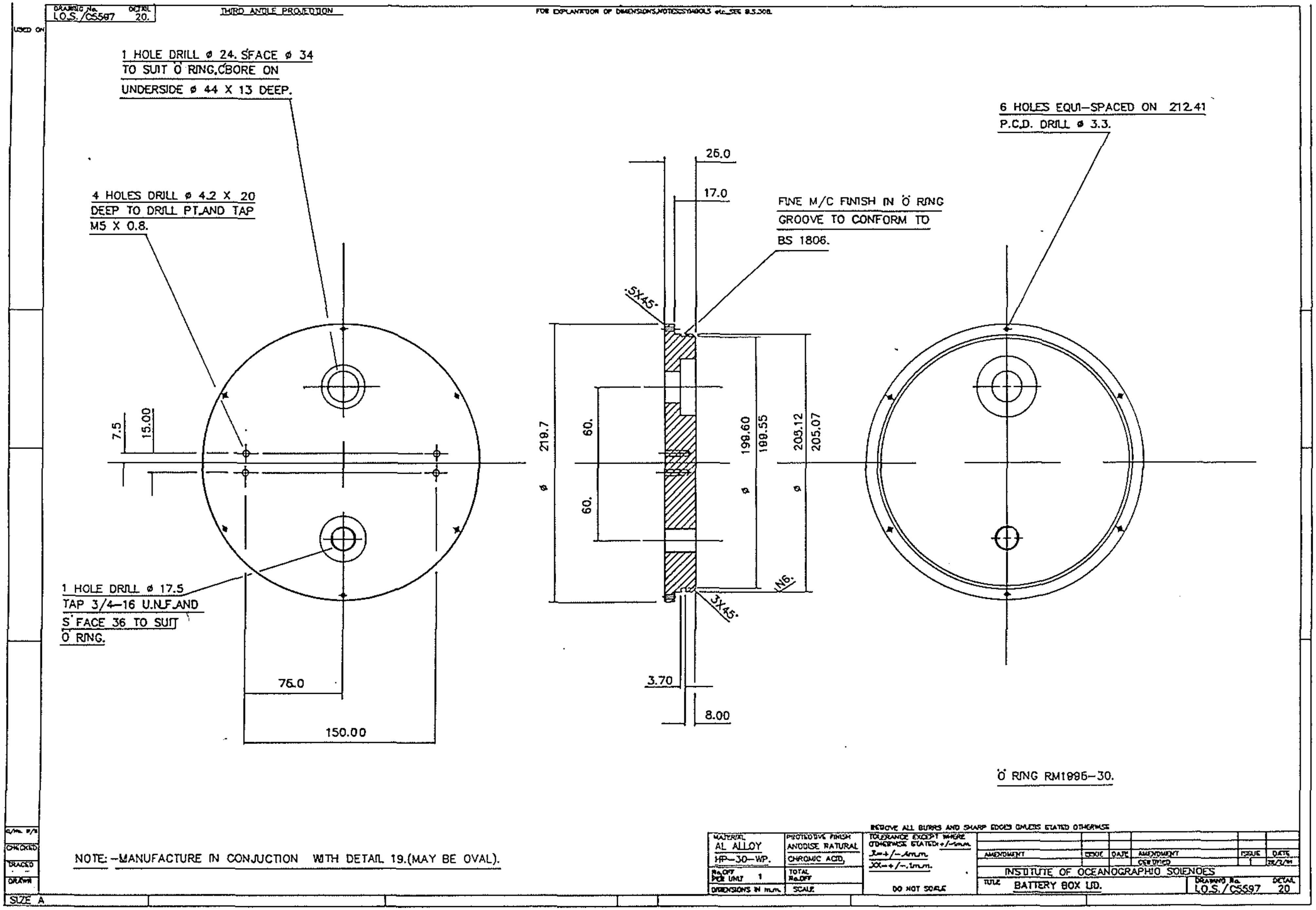


NOTE:-WELD WHERE THUS:- ◣

WELD TO BE WATER-TIGHT.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

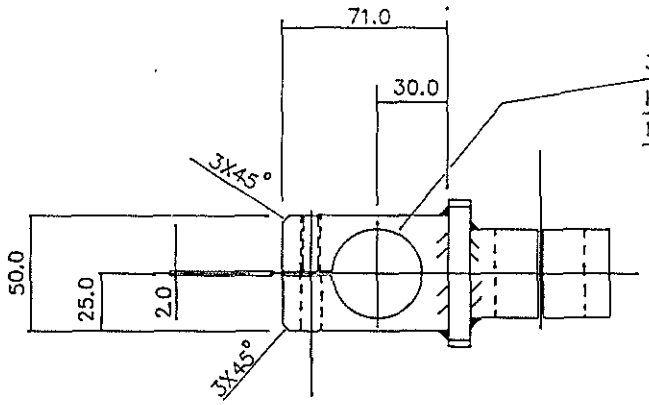
O/No. W/S	MATERIAL AL ALLOY HT-30-WP.	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1mm X.X ± .4mm XX.X ± .1mm					
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 1.	TOTAL No.OFF 6.					CERTIFIED	1	2/4/91
DRAWN	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE D				TITLE BATTERY BOX.			DRAWING No. I.O.S./ C5597		DETAIL 19.


DRAWING No. L.O.S./C5597 DETAIL 20.
THIRD ANGLE PROJECTION
FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308
USED ON
1 HOLE DRILL ø 24. S'FACE ø 34
TO SUIT O RING, C'BORE ON
UNDERSIDE ø 44 X 13 DEEP.
4 HOLES DRILL ø 4.2 X 20
DEEP TO DRILL PT. AND TAP
M5 X 0.8.
7.5
15.00
1 HOLE DRILL ø 17.5
TAP 3/4–16 U.N.F. AND
S'FACE 36 TO SUIT
O RING.
76.0
150.00
25.0
17.0
.5X45°
FINE M/C FINISH IN O RING
GROOVE TO CONFORM TO
BS 1806.
ø 219.7
60.
60.
ø 199.60
199.55
ø 205.12
205.07
N6.
3X45°
3.70
8.00
6 HOLES EQUI–SPACED ON 212.41
P.C.D. DRILL ø 3.3.
O RING RM1995–30.
NOTE:–MANUFACTURE IN CONJUCTION WITH DETAIL 19.(MAY BE OVAL).
REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE
MATERIAL AL ALLOY HP–30–WP.
PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.
TOLERANCE EXCEPT WHERE OTHERWISE STATED +/–.mm
X–+/–.4mm
XX–+/–.1mm.
No. OFF PER UNIT 1
TOTAL No. OFF
DIMENSIONS IN mm
SCALE
DO NOT SCALE
AMENDMENT ISSUE DATE
CERTIFIED
INSTITUTE OF OCEANOGRAPHIC SCIENCES
TITLE BATTERY BOX LID.
DRAWING No. L.O.S./C5597 DETAIL 20
CHECKED
TRACED
DRAWN
SIZE A

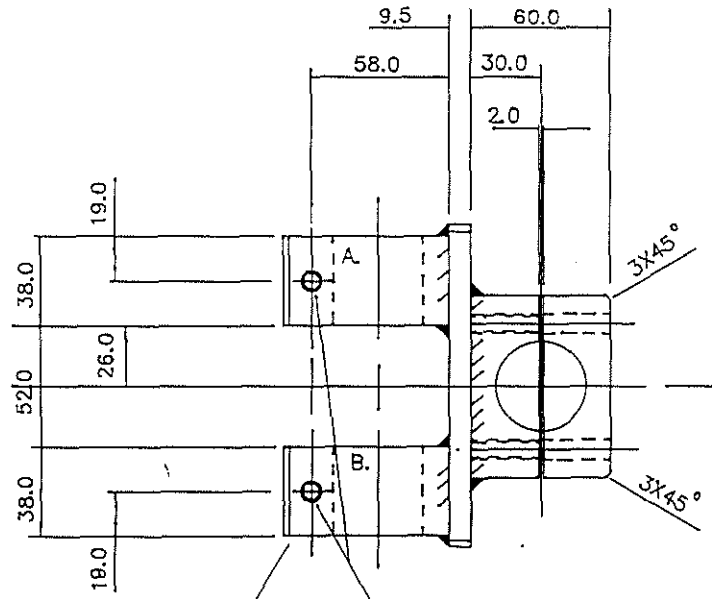
DRAWING No. I.O.S./C5597 DETAIL 21

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

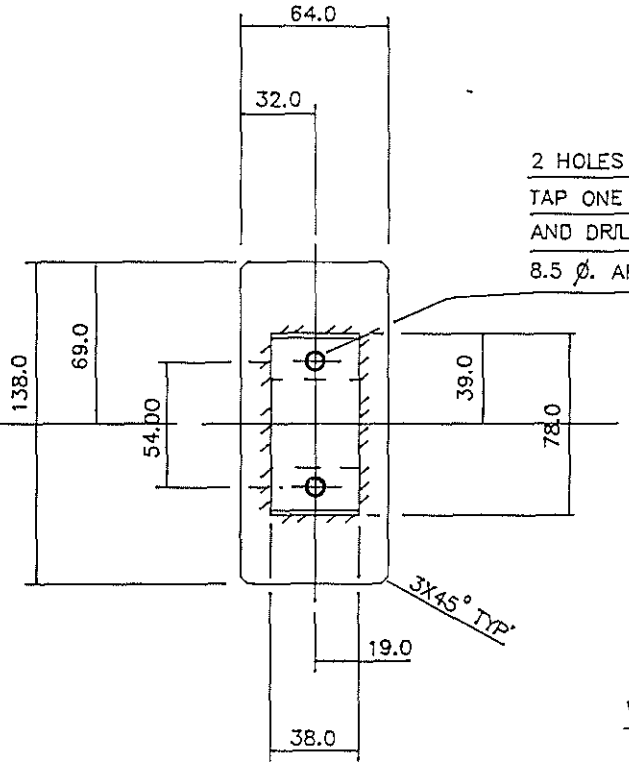


3 HOLES DRILL Ø 38.4
HOLES IN CLAMPS A&B
MUST BE ALIGNED.



BLOCKS TO BE ALIGNED
BEFORE WELDING AND THE
THREADED SIDE OF THE BLOCKS
TO BE ON OPPOSITE SIDES TO
EACH OTHER.

2 HOLES DRILL Ø 6.8 THRO
TAP ONE HALF OF BLOCK M8
AND DRILL THE OTHER HALF
8.5 Ø.



2 HOLES DRILL Ø 6.8 THRO
TAP ONE HALF OF BLOCK M8
AND DRILL THE OTHER HALF
8.5 Ø. AFTER CUTTING IN TWO.

WELD WHERE THUS:-

MATERIAL AL ALLOY HE-30-WP.	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE. TOLERANCE EXCEPT WHERE OTHERWISE STATED +/-mm.m. X=+/-.4m.m. XX=+/-.1m.m.	
No. OFF PER UNIT 1	TOTAL No. OFF		
DIMENSIONS IN m.m.	SCALE F.S.	DO NOT SCALE	

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			ORIGINATED	1	28-2-67

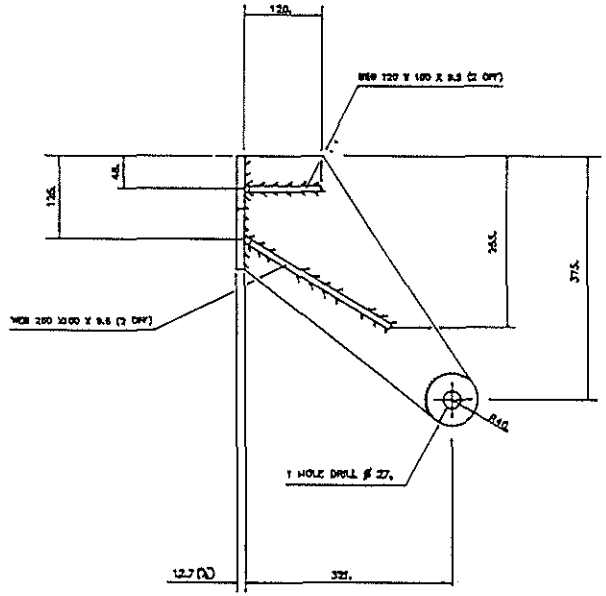
INSTITUTE OF OCEANOGRAPHIC SCIENCES

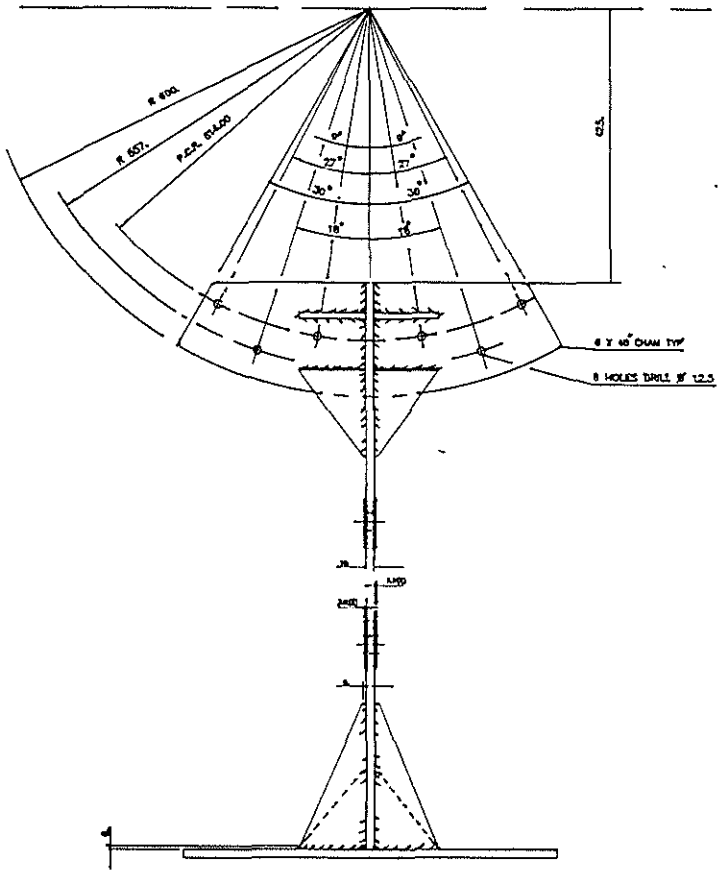
TITLE YOUNGS ANEMOMETER CLAMP.

DRAWING No. I.O.S./C5597 DETAIL 21.

DRAWN
CHECKED
TRACED

SIZE A





NOTES.

WELD WHERE THUS :- [illegible]

PLATE MUST BE FLAT AFTER WELDING.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

MATERIAL MILD STEEL	PROTECTIVE FINISH PAINT RED OXIDE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ±.../...mm					
No.OFF PER UNIT 1	TOTAL No.OFF	.../...mm					
DIMENSIONS IN mm	SCALE	DO NOT SCALE	AUTHORITY	ISSUE	DATE	AMENDMENT	ISSUE	DATE
						OCB DRAWN	1	18-2-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE ANCHOR FRAME

DRAWING No. L.O.S./03397

SCALE 1:5

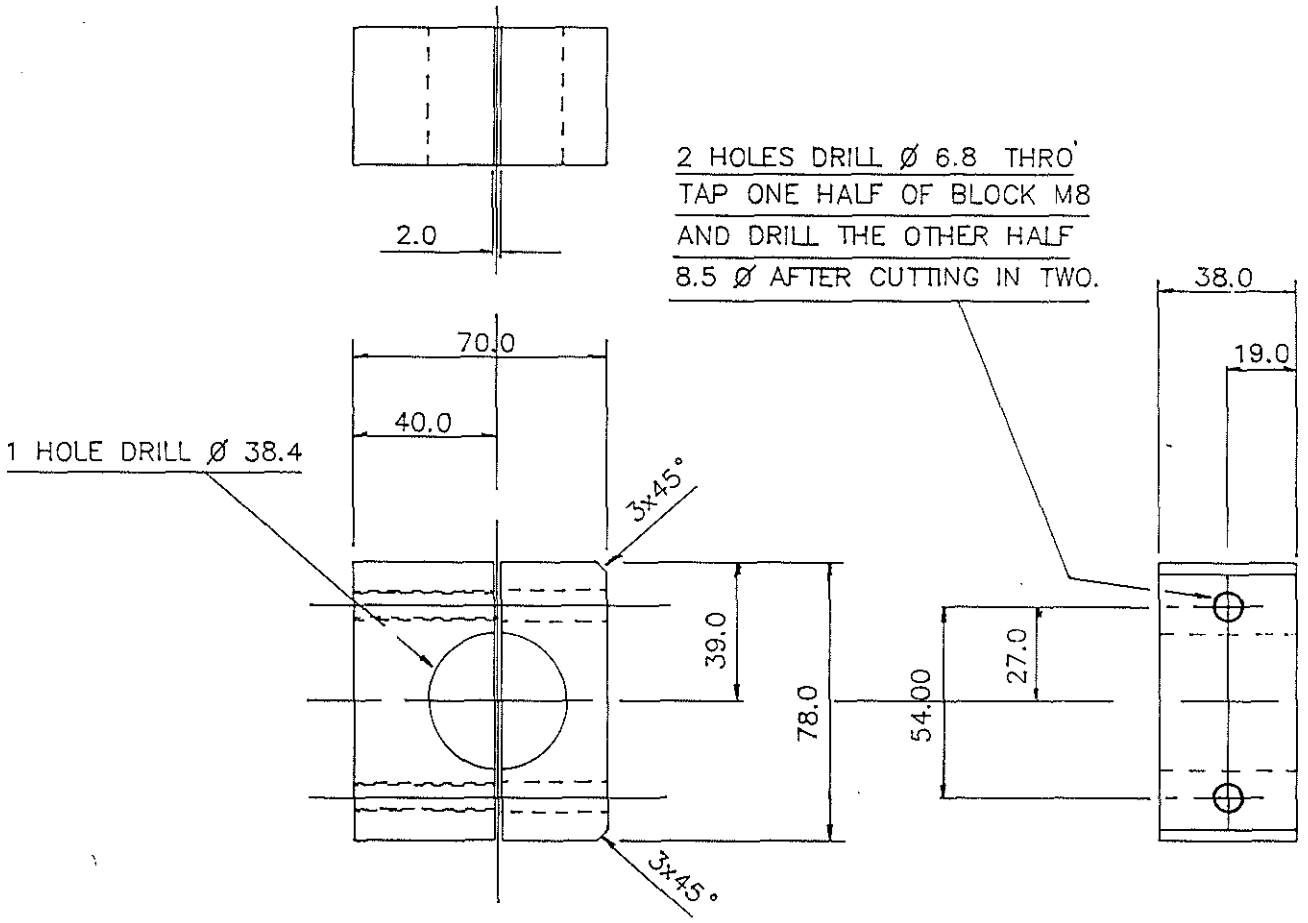
SIZE A

DRAWING No. I.O.S./C5597 DETAIL 23

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL AL ALLOY HE-30-WP	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. .X=+/-.4m.m. .XX=+/-.1m.m.						
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	28/2/91
DRAWN	No.OFF PER UNIT 8	TOTAL No.OFF	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE N.T.S.		TITLE TOP RING CLAMP.			DRAWING No. I.O.S./C5597		DETAIL 23

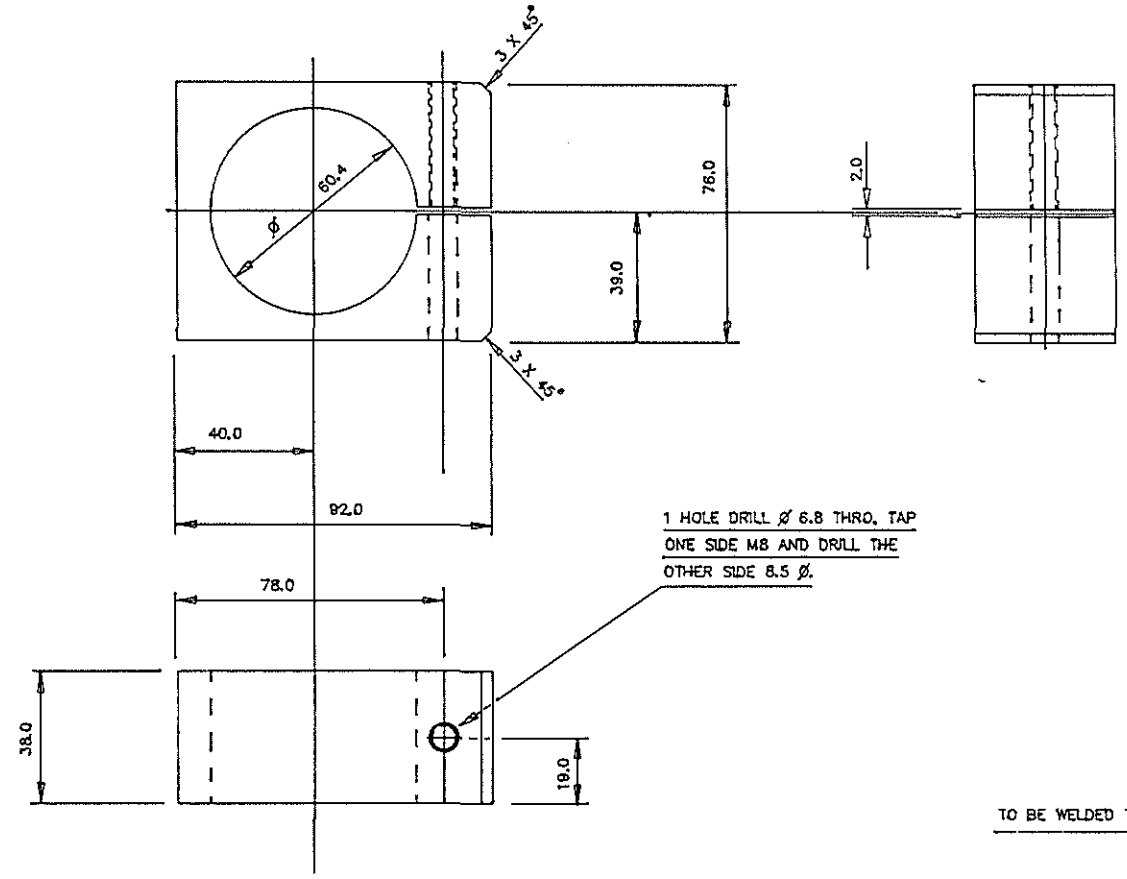
SIZE D

DRAWING No.	DETAIL
I.O.S./C5597	25

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



TO BE WELDED TO DETAIL 26.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL AL ALLOY HE-30-WP	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID AFTER WELDING.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. X=+/-.4m.m. XX=+/-.1m.m.
CHECKED			
TRACED			
DRAWN	No.OFF PER UNIT 2	TOTAL No.OFF	
	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			CERTIFIED	1	4/3/81

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE 60 m.m. CLAMP.

DRAWING No. I.O.S./C5597 DETAIL 25

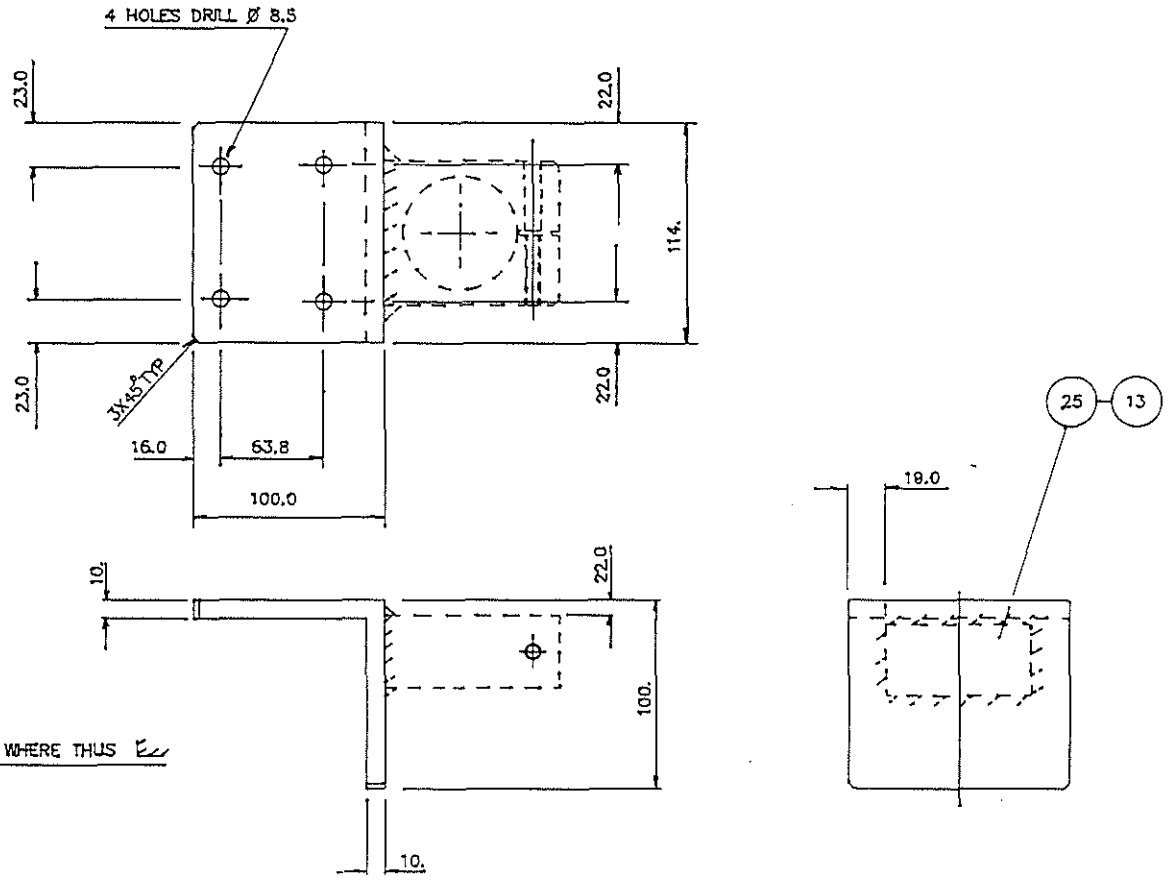
SIZE D

DRAWING No.	DETAIL
I.O.S./ C5597	26

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON

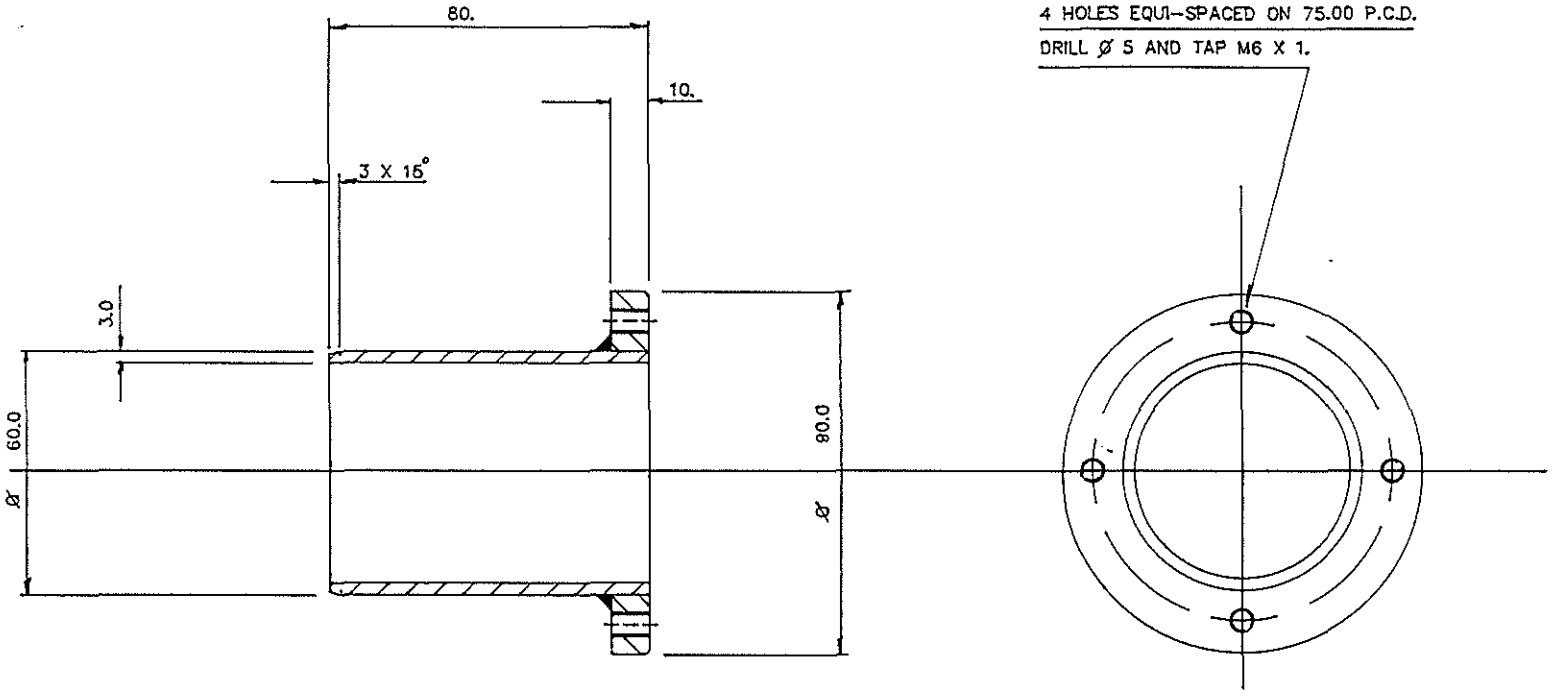


REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL AL ALLOY HE-30-WP	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. .X=+/-.4m.m. .XX=+/-.1m.m.					
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 3	TOTAL No.OFF					CERTIFIED	1	4-3-91
DRAWN	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE D				TITLE ANGLE A			DRAWING No. I.O.S./ C5597		DETAIL 26

I.O.S./C5597 27.

USED ON



WELD WHERE THUS:- ◣

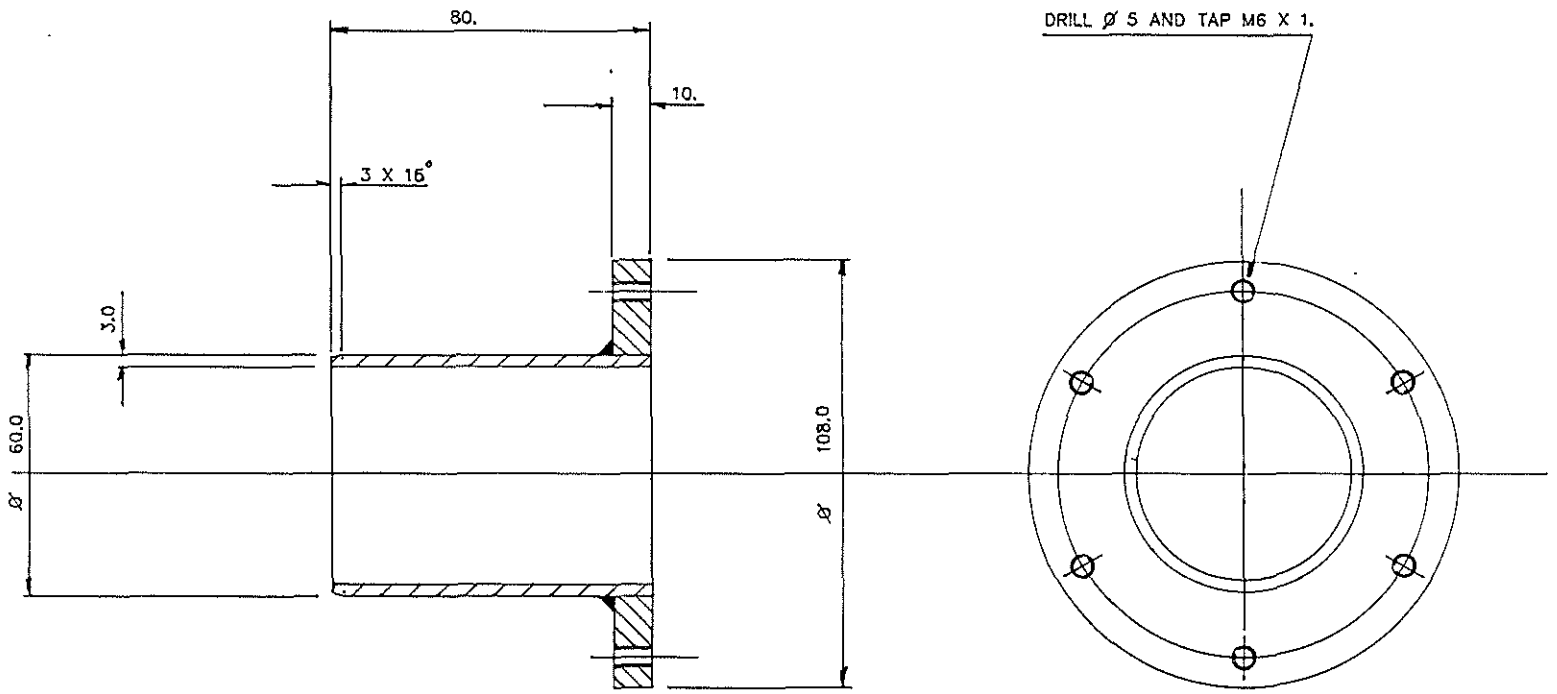
REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S									
CHECKED	MATERIAL AL ALLOY HE-30-WP.	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. .X=+/-.4m.m .XX=+/-.1m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	4/3/81
DRAWN	No.OFF PER UNIT 1.	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE ANEMOMETER BASE TUBE.			DRAWING No. I.O.S./C5597	DETAIL 27.	

SIZE D

I.O.S./C5597 28.

USED ON



WELD WHERE THUS:-

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL AL ALLOY HE-30-WP.	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. X=+/-.4m.m. .XX=+/-.1m.m.					
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 2.	TOTAL No.OFF					CERTIFIED	1.	4/3/71
DRAWN	DIMENSIONS IN-m.m.	SCALE N.T.S.	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
				TITLE DCP ANTENNA TUBE BASE.			DRAWING No. I.O.S./C5597	DETAIL 28.	

SIZE D

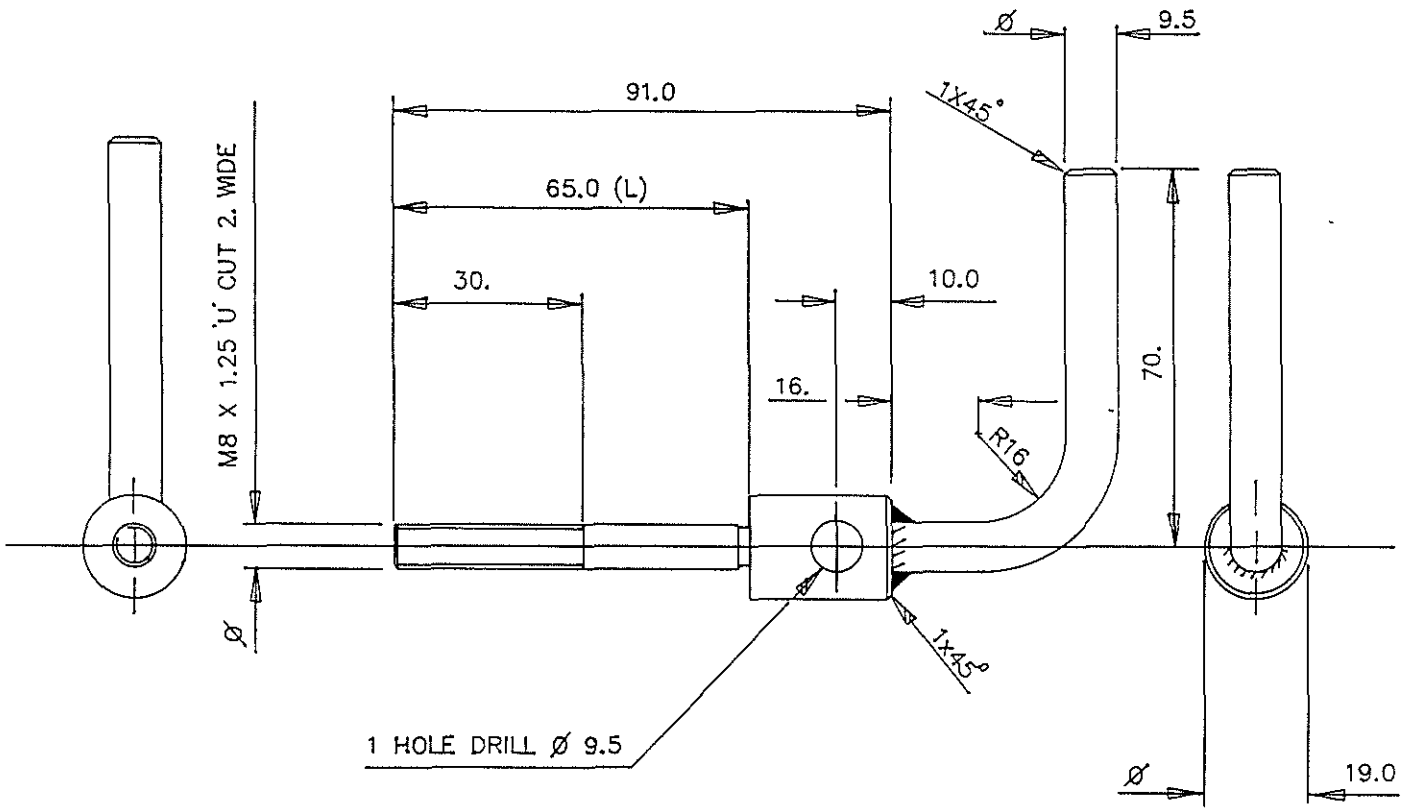
DRAWING No.	DETAIL
I.O.S./C5597	29.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

C5597 29.

USED ON



NOTE:-WELD WHERE THUS:-

(L):-CUT TO LENGTH REQD.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ST. STEEL. 316-S16.	PROTECTIVE FINISH NONE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. X=+/-.4m.m. XX=+/-.1m.m.					
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	14/3/91
DRAWN	No.OFF PER UNIT 12.	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE CLAMP BOLT.			DRAWING No. I.O.S./C5597		DETAIL 29.

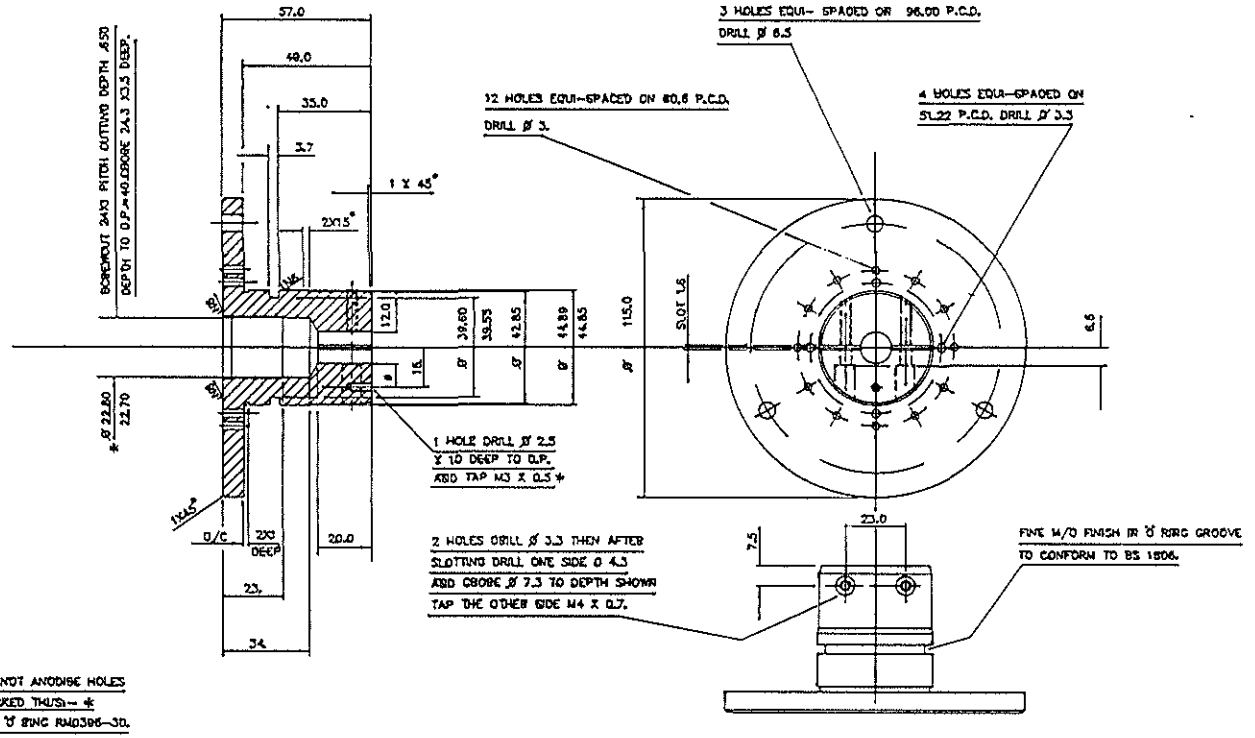
SIZE D

DRAWING No.	DETAIL
I.O.S./C5597	30.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



NOTE:-DO NOT ANODISE HOLES MARKED THUS:- *
USE 'O' RING RM0306-30.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S								
CHECKED	MATERIAL AL ALLOY HE-30-WP.	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. X=+/-.4 m.m. XX=+/-.1 m.m.					
TRACED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
							CERTIFIED	1	14/3/91
DRAWN	No.OFF PER UNIT 4	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE N.T.S.	DO NOT SCALE	TITLE J.B. END CAP (BUOY).			DRAWING No. I.O.S./C5597	DETAIL 30.	

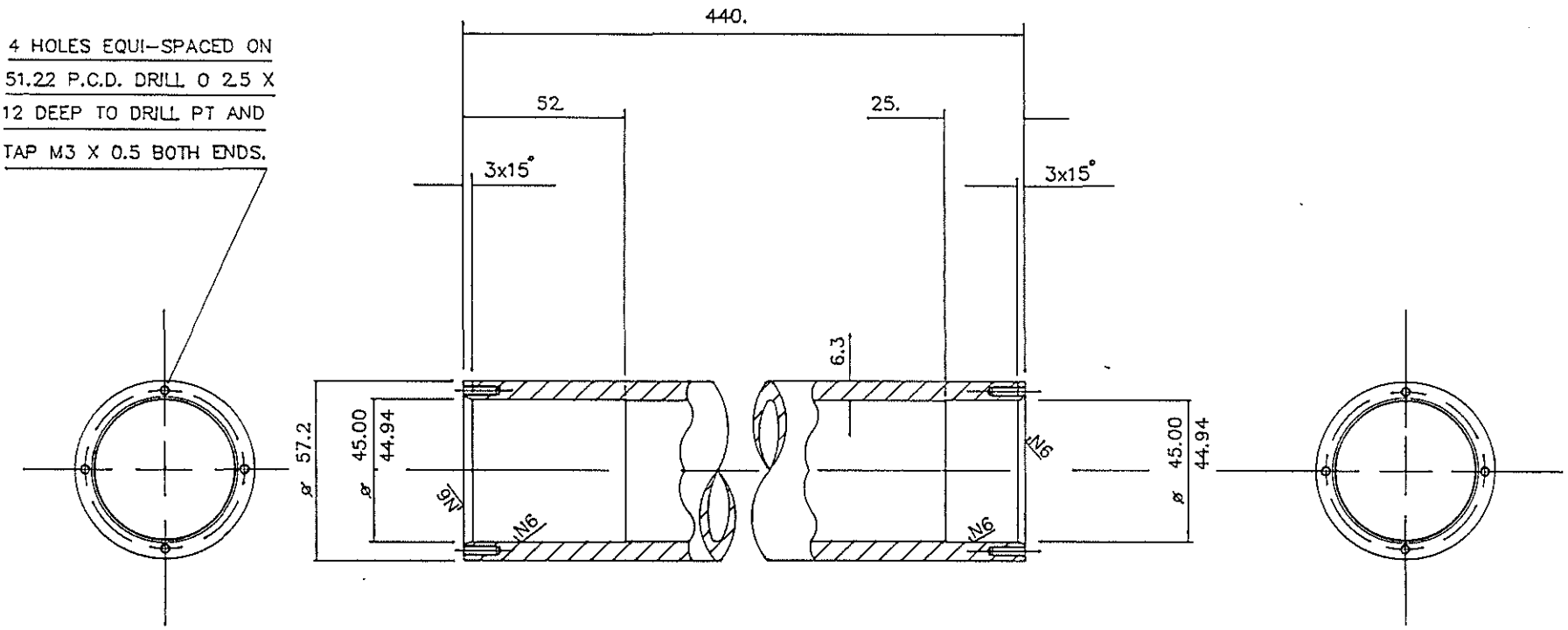
SIZE D

DRAWING No.	DETAIL
I.O.S. / C5597	31

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

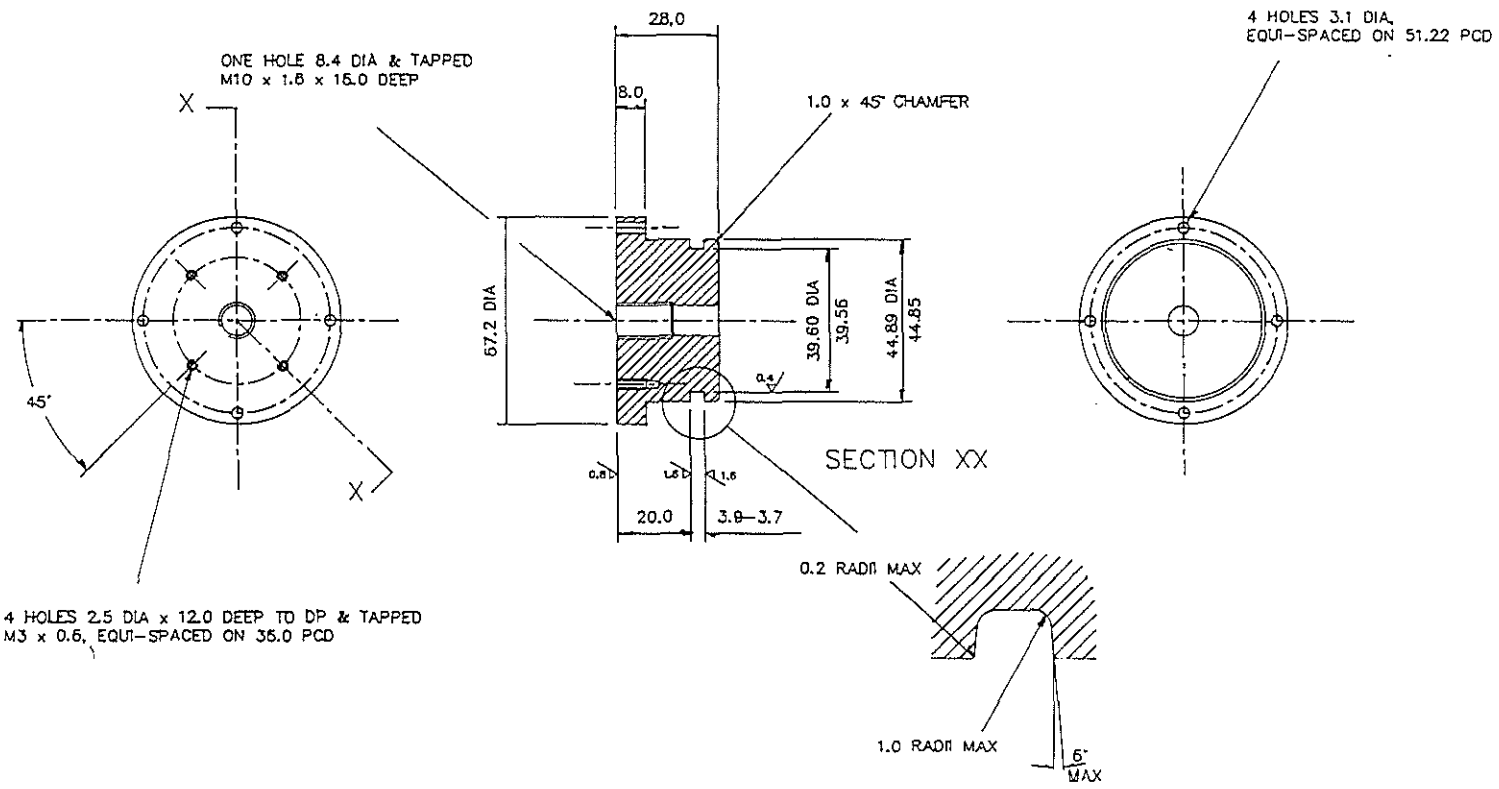
O/No. W/S								
CHECKED	MATERIAL AL ALLOY HT-30-WP.	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. .X =+/-.4m.m. .XX =+/-.1m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	18/3/91
DRAWN	No.OFF PER UNIT 4	TOTAL No.OFF	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE N.T.S.		TITLE J.B. TUBE (BUOY).			DRAWING No. I.O.S. / C5597		DETAIL 31
SIZE D									

DRAWING No.	DETAIL
I.O.S./C5597	32

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S			
CHECKED	MATERIAL ALUMINIUM ALLOY HE-30	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1
TRACED	No. OFF PER UNIT 2	TOTAL No. OFF	
DRAWN N.JUMMINS	DIMENSIONS IN m.m.	SCALE 1:1 & 5:1	DO NOT SCALE

AMENDMENT	ISSUE	DATE
RE-DRAWN ON COMPUTER	3	11-12-91
44.89–44.85 DIA WAS 45.17–45.15	2	9-6-91
CERTIFIED	1	22-4-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE: TEMPERATURE SENSOR MOUNTING

DRAWING No. I.O.S./C5597 DETAIL 32

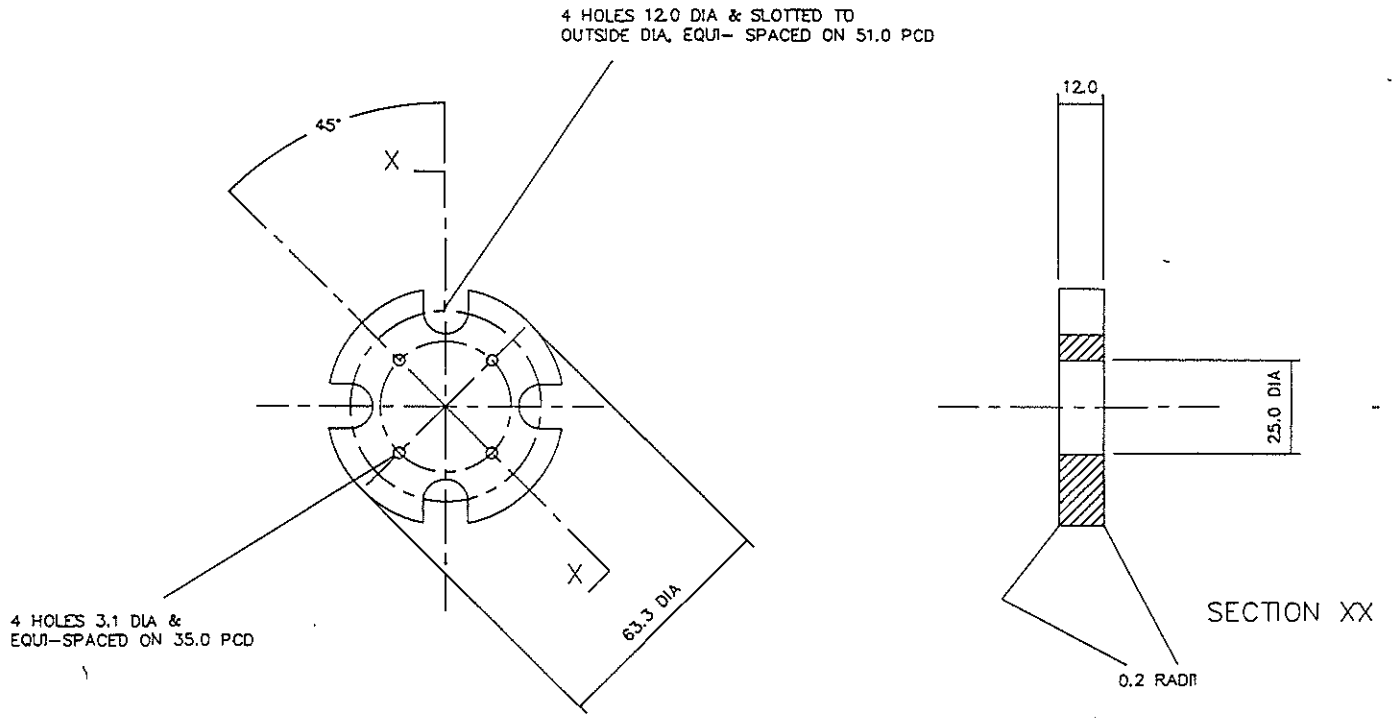
SIZE C

DRAWING No.	DETAIL
I.O.S./ C5597	33

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S								
CHECKED	MATERIAL RIGID PVC	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1			RE-DRAWN ON COMPUTER	2	11-12-91
TRACED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
							CERTIFIED	1	22-4-91
DRAWN N.JIMMINS	No.OFF PER UNIT 2	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE SPACER RING			DRAWING No. I.O.S./ C5597		DETAIL 33

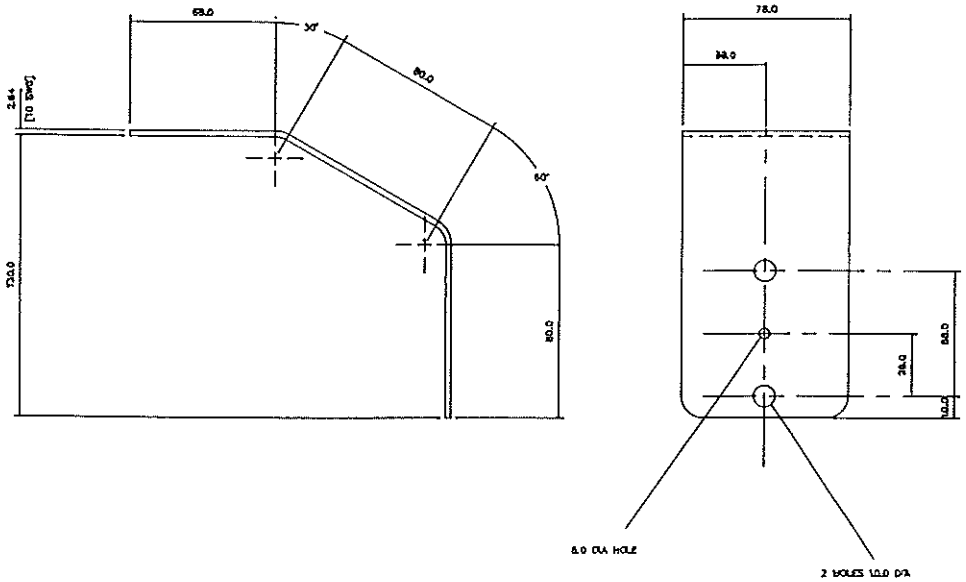
SIZE C

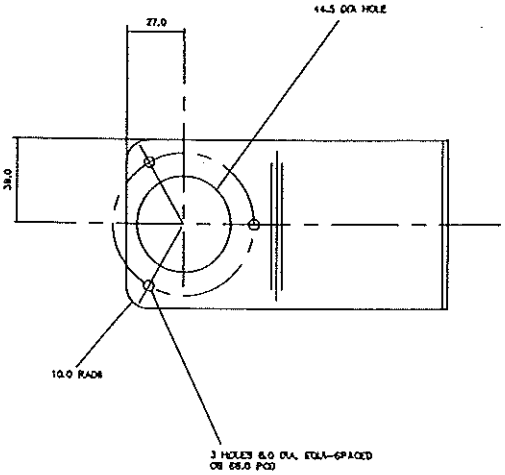
DRAWING No. I.O.S./C5597 DETAIL 34

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON





REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/Ba. W/S	MATERIAL ALUMINIUM ALLOY HE-30	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.4					3	13-12-91
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	24-4-91
DRAWN	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE BRACKET			DRAWING No. I.O.S./C5597		DETAIL 34

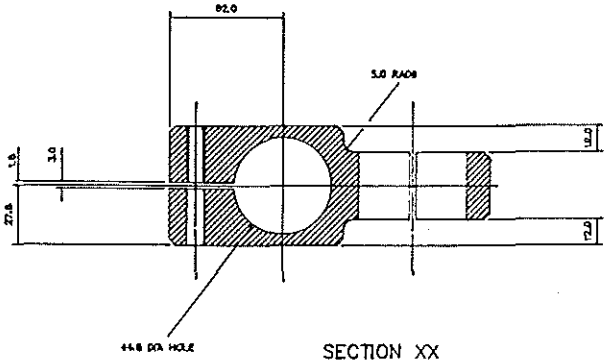
SIZE B

DRAWING No. I.O.S./C5597 DETAIL 35

THIRD ANGLE PROJECTION

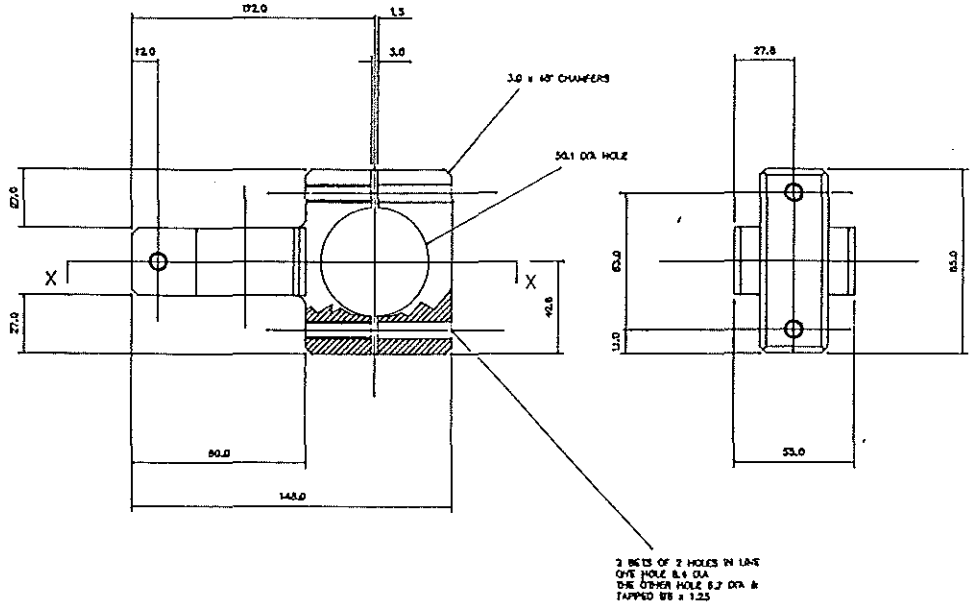
FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



SECTION XX

NOTE
REMOVE SHARP CORNERS OF 3.0 WIDE SLOTS & MAIN BORES



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/Bo. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:					3	23-12-91
CHECKED	ALUMINIUM ALLOY HE-30	ANODISE	± 0.4					2	25-6-91
TRACED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
DRAWN	No.OFF PER UNIT 2	TOTAL No.OFF					CERTIFIED	1	10-6-91
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
				TITLE CLAMP				DRAWING No. I.O.S./C5597	DETAIL 35

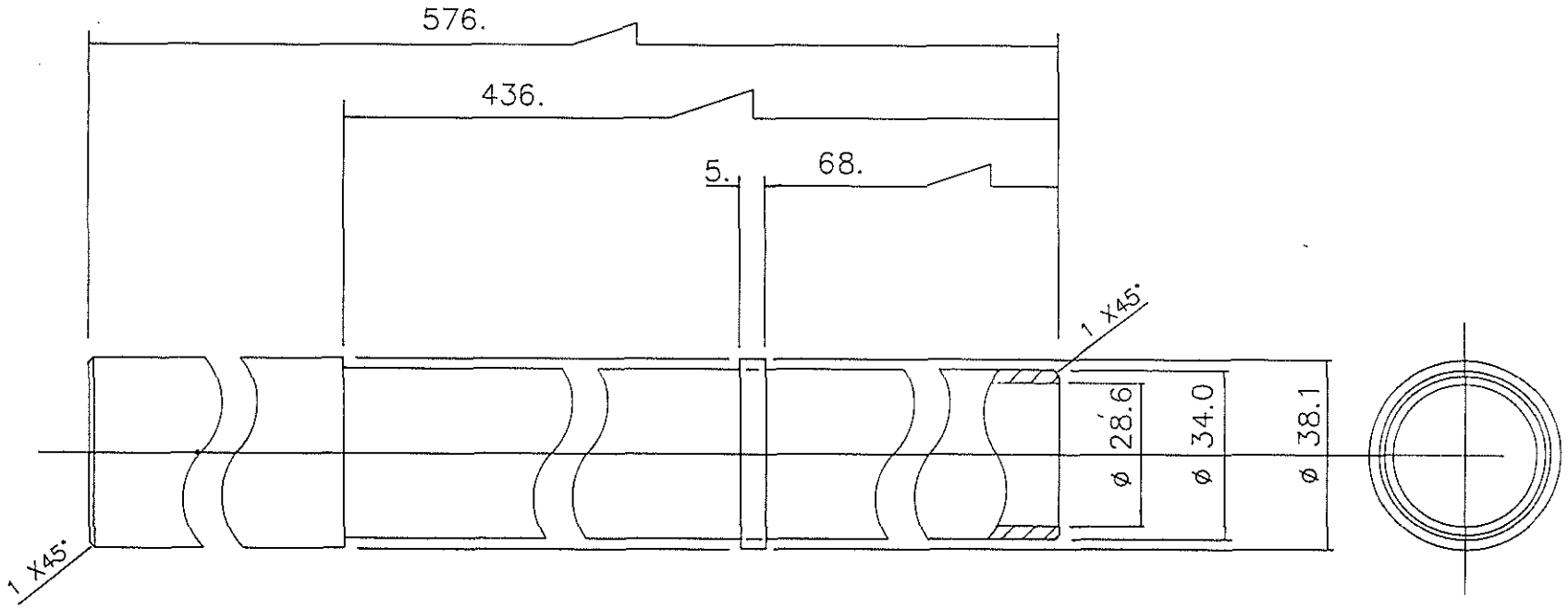
SIZE B

DRAWING No.	DETAIL
I.O.S./ C5597	38.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc, SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

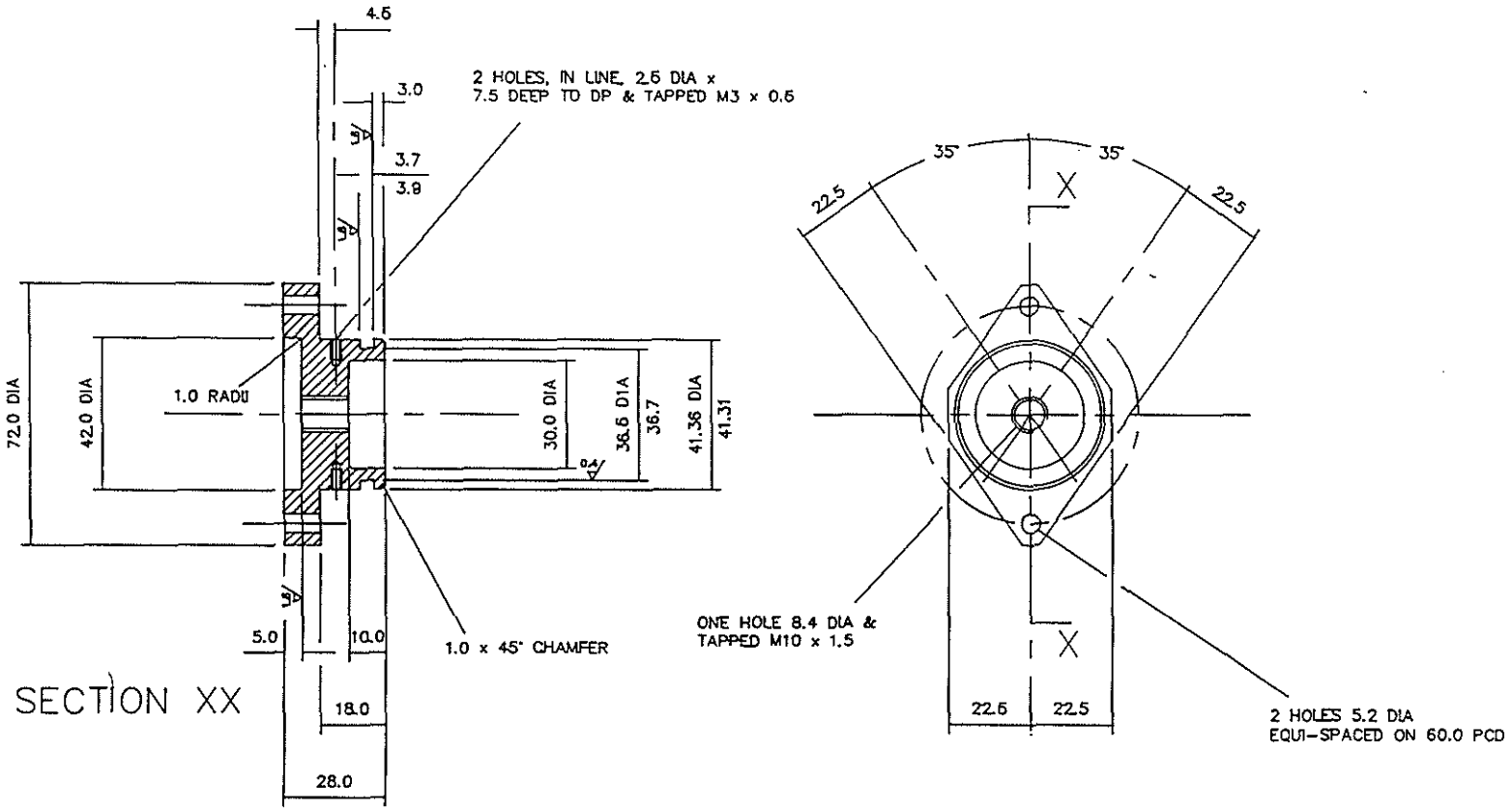
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m.						
CHECKED	AL ALLOY HT-30-WP	ANODISE NATURAL CHROMIC ACID.	.X=+/-.4m.m. .XX=+/-.1m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 2.	TOTAL No.OFF 2.					CERTIFIED	1	9/5/91
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE D				TITLE ANEMOMETER EXTENSION TUBE.			DRAWING No. I.O.S./C5597		DETAIL 38.

DRAWING No. I.O.S./C5597 | DETAIL 39

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ALUMINIUM ALLOY HE-30	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1
CHECKED			
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF	
DRAWN N.JIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE

AMENDMENT	ISSUE	DATE
RE-DRAWN ON COMPUTER	2	28-4-92
CERTIFIED	1	15-5-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE: FLANGED END CAP

DRAWING No. I.O.S./C5597 | DETAIL 39

SIZE C

DRAWING No.	DETAIL
I.O.S./5597	40

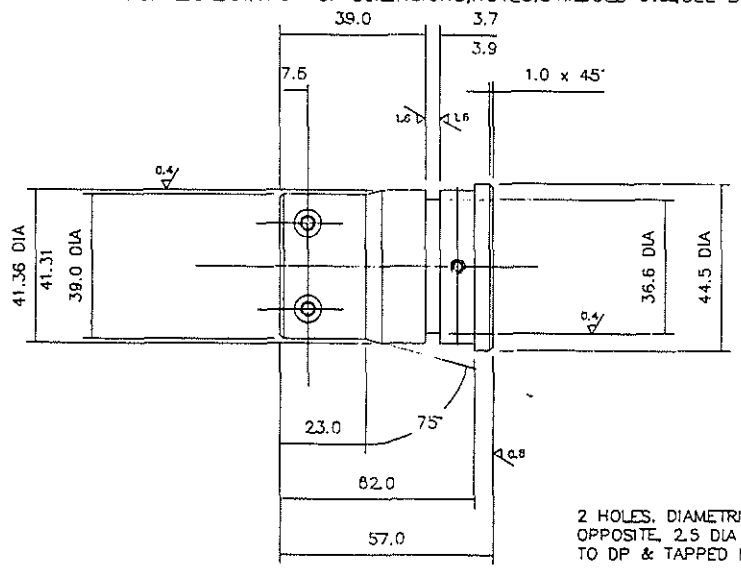
THIRD ANGLE PROJECTION

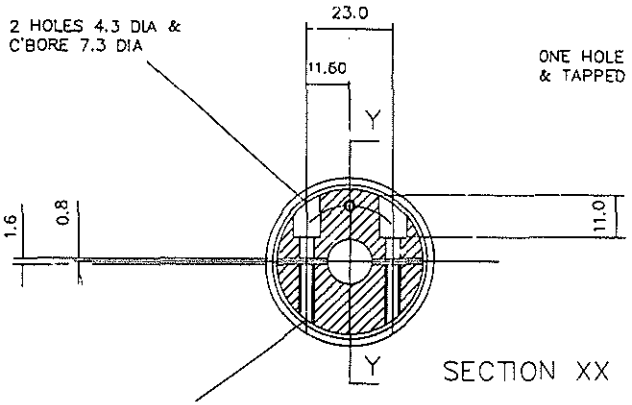
FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON

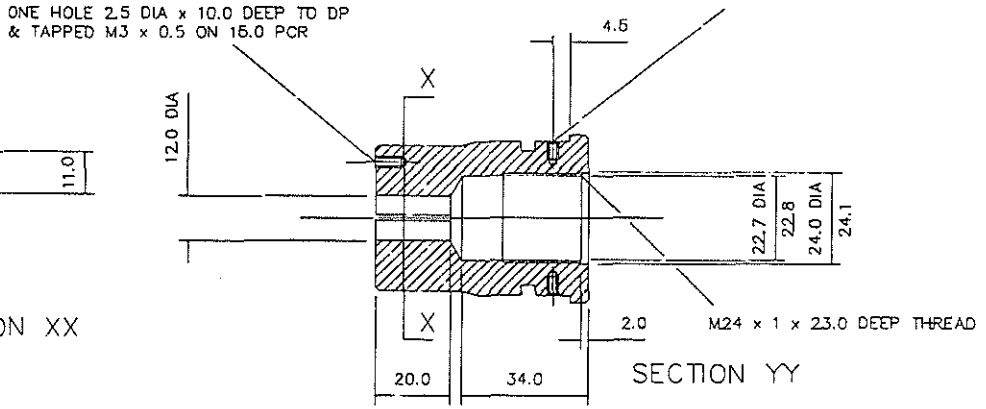
NOTE

MASK ALL THREADS BEFORE ANODISING





SECTION XX



SECTION YY

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S			
CHECKED	MATERIAL: ALUMINIUM ALLOY	PROTECTIVE FINISH: ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF	
DRAWN N.JIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE

AMENDMENT	ISSUE	DATE
RE-DRAWN ON COMPUTER	2	9-12-92
CERTIFIED	1	15-6-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE	DRAWING No.	DETAIL
END CAP	I.O.S./5597	40

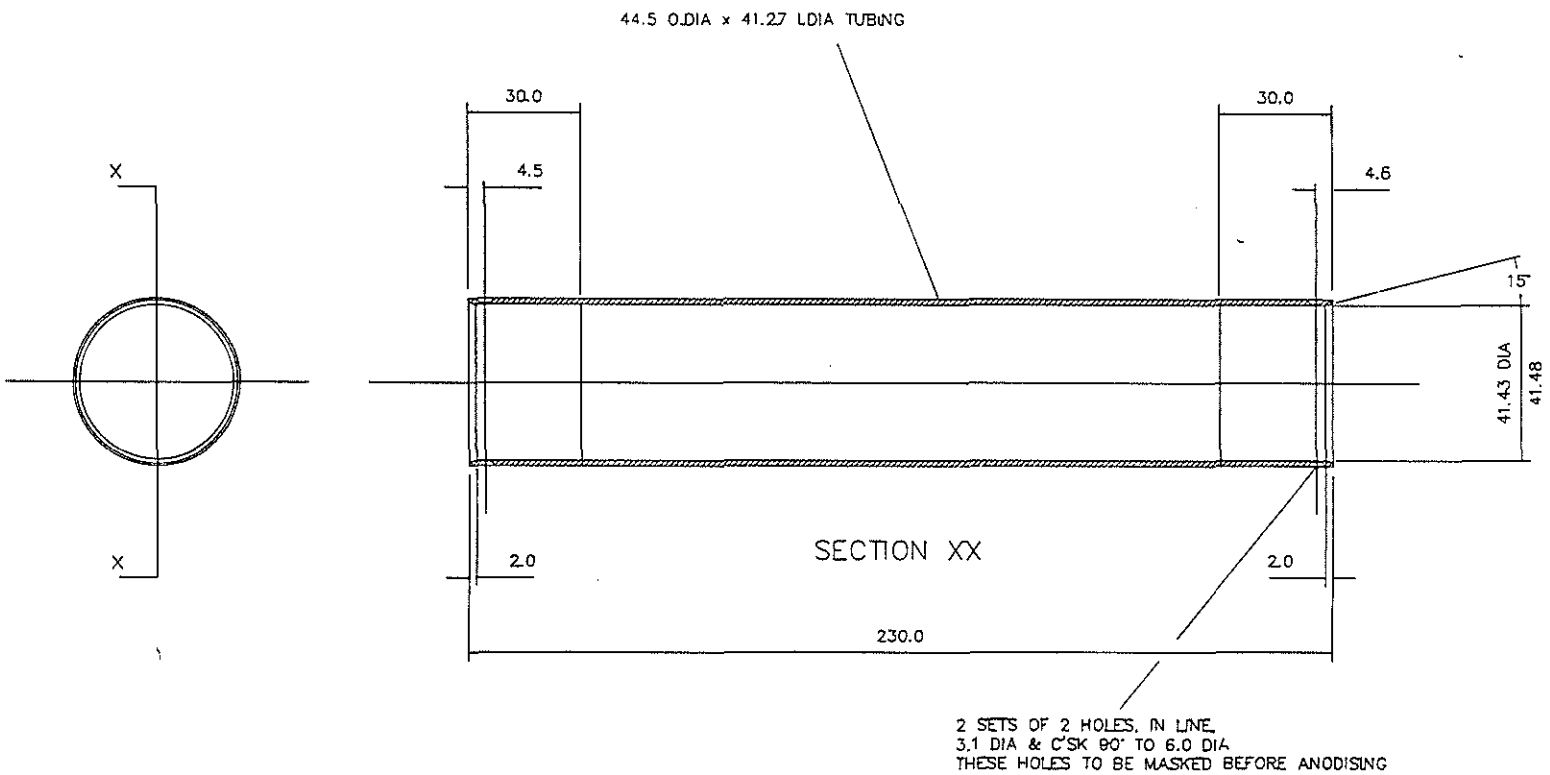
SIZE C

DRAWING No.	DETAIL
I.O.S./ 5597	41

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ±0.4			RE-DRAWN ON COMPUTER	2	10-12-92
CHECKED				AMENDMENT	ISSUE DATE	AMENDMENT	ISSUE	DATE
TRACED						CERTIFIED	1	15-6-92
DRAWN N.JENKINS	No.OFF PER UNIT 2	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES				
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE TUBE		DRAWING No. I.O.S./ 5597		DETAIL 41

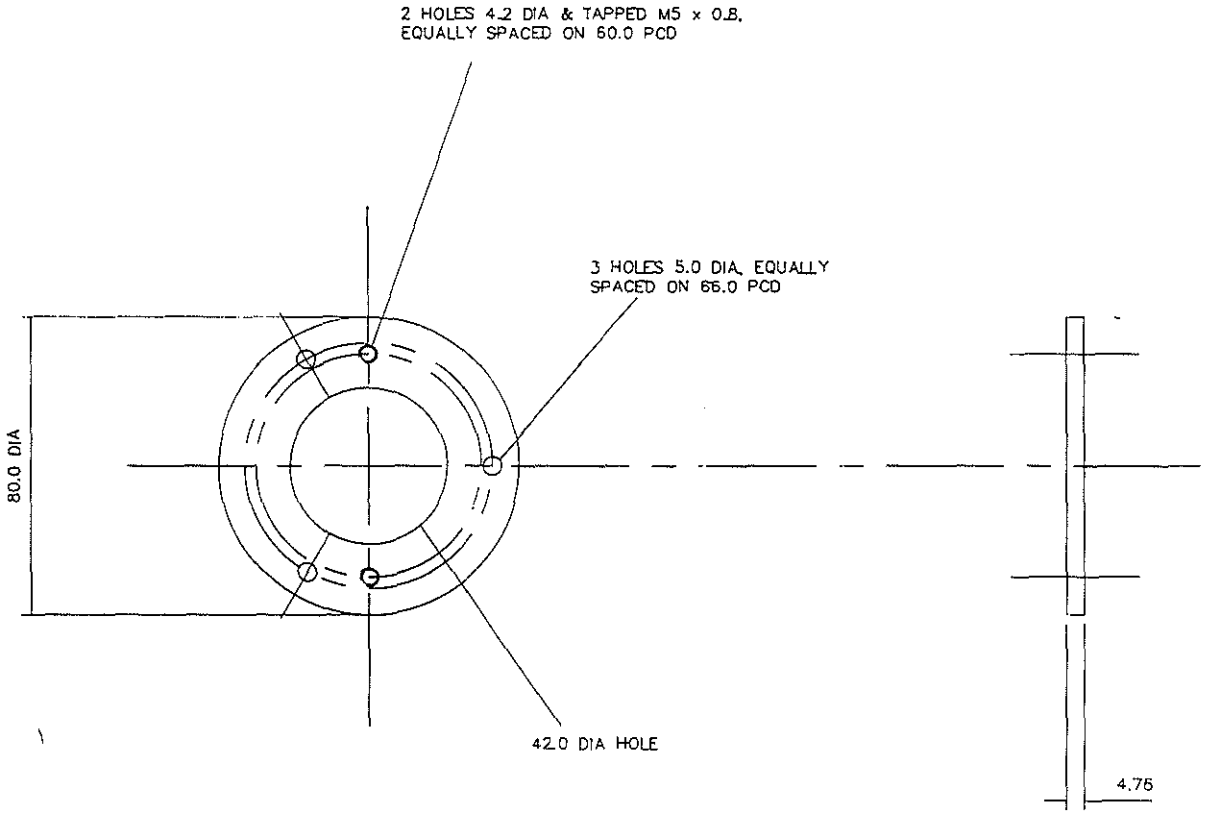
SIZE C

DRAWING No.	DETAIL
I.O.S./ 5597	42

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1				RE-DRAWN ON COMPUTER	2	10-12-92
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	15-5-91
DRAWN N.TIMMINS	No.OFF PER UNIT 2	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE PLATE			DRAWING No. I.O.S./5597		DETAIL 42

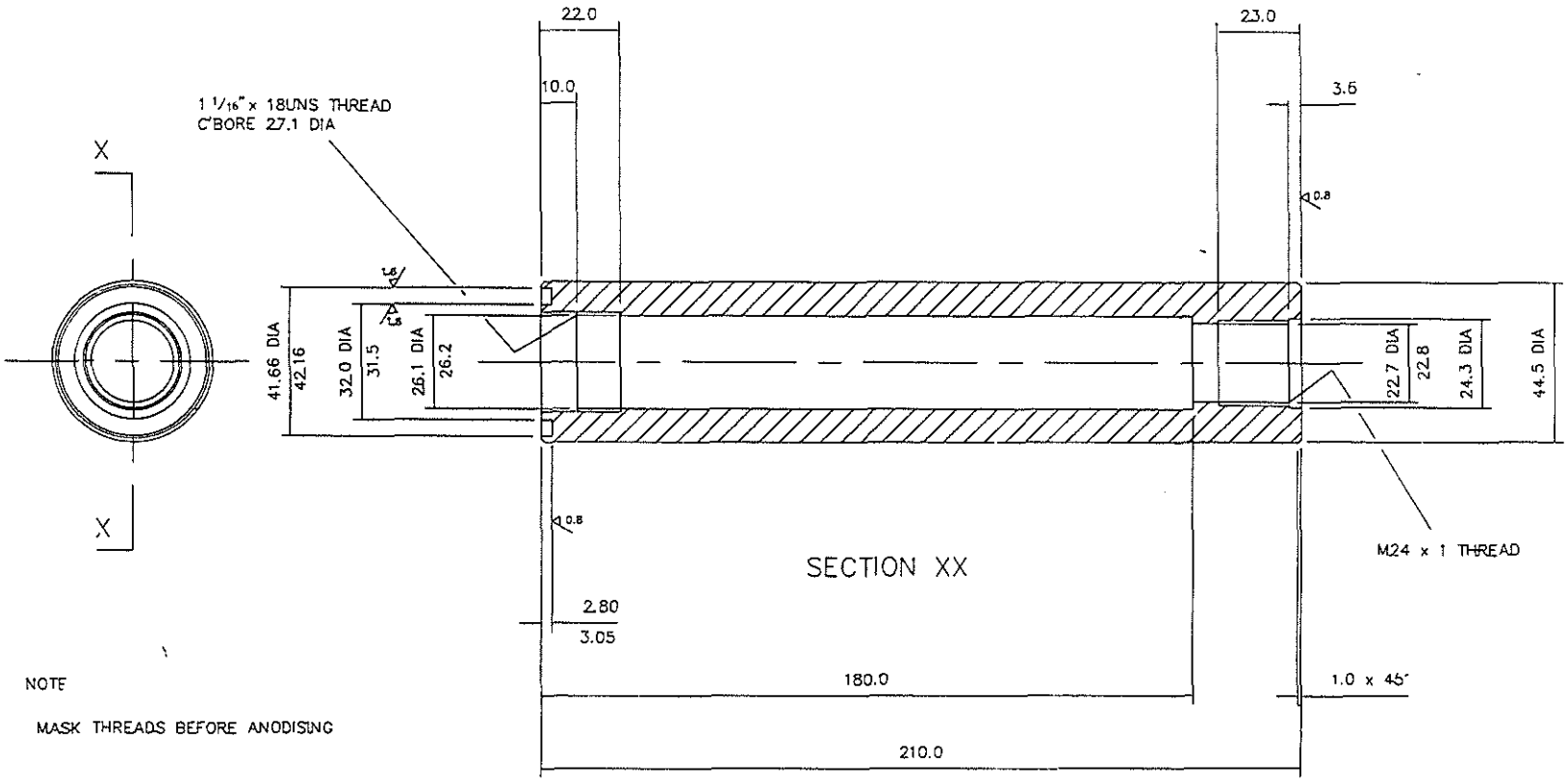
SIZE C

DRAWING No.	DETAIL
I.O.S./ 5597	43

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc. SEE B.S.308.

USED ON



NOTE

MASK THREADS BEFORE ANODISING

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1			RE-DRAWN ON COMPUTER	2	11-12-92
CHECKED				AMENDMENT	ISSUE DATE	AMENDMENT	ISSUE	DATE
TRACED						CERTIFIED	1	20-6-92
DRAWN NUMMINS	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES				
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE TUBE, XENON BEACON		DRAWING No. I.O.S./ 5597		DETAIL 43

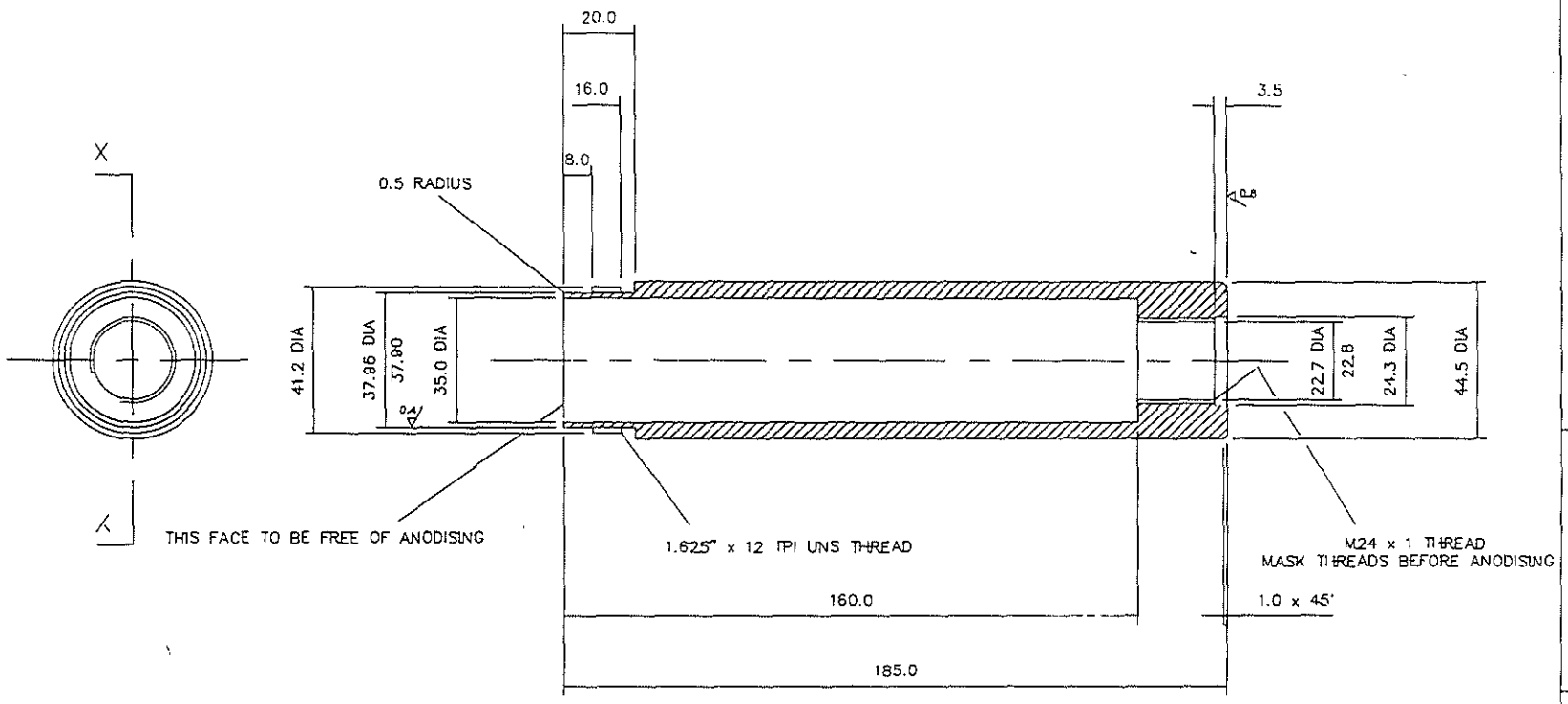
SIZE C

DRAWING No.	DETAIL
I.O.S./ 5597	44

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc. SEE B.S.308.

USED ON



SECTION XX

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1				RE-DRAWN ON COMPUTER	2	11-12-92
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	20-5-92
DRAWN N.TIMMINS	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE TUBE, R.F. BEACON			DRAWING No. I.O.S./ 5597		DETAIL 44

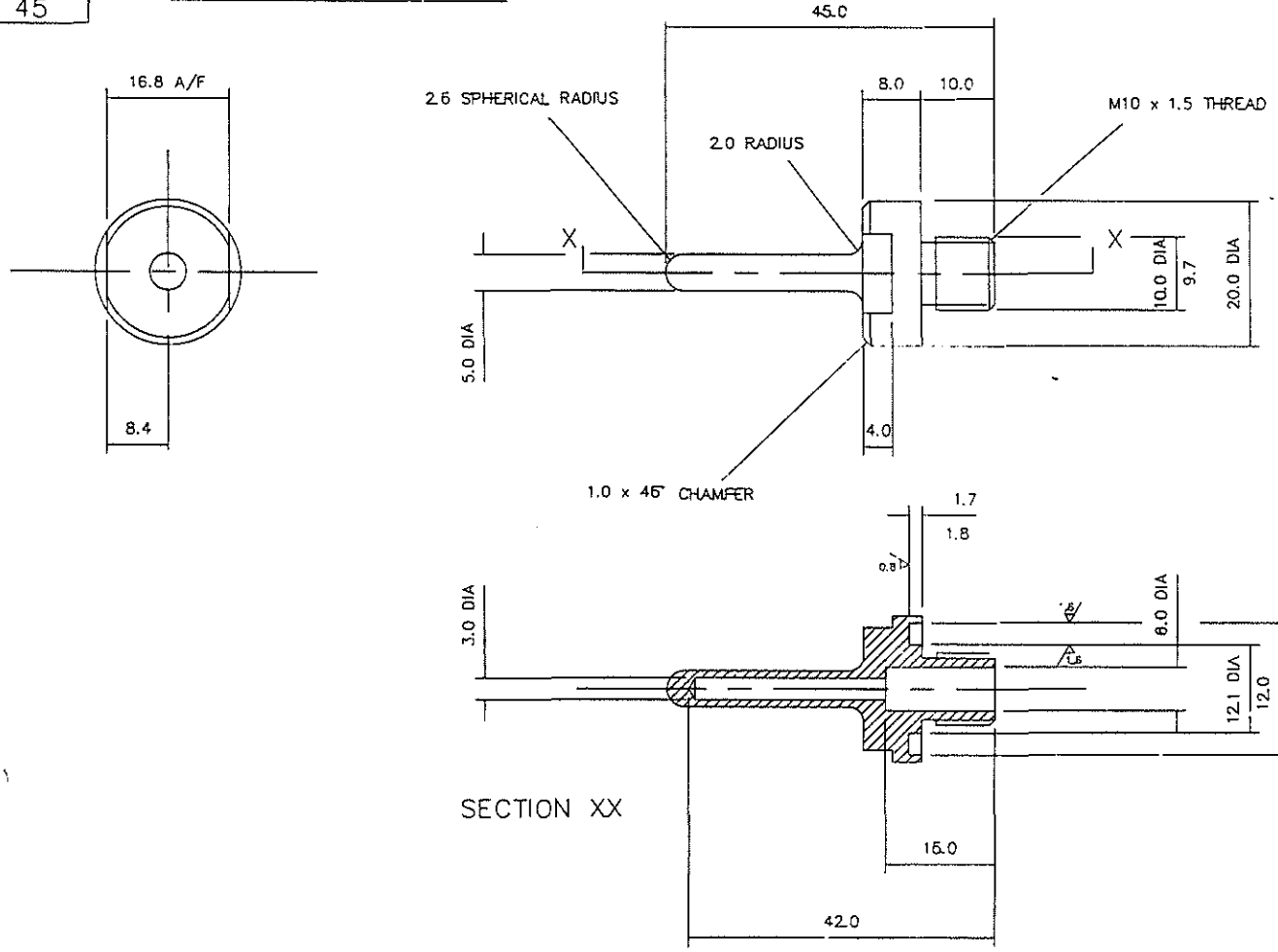
SIZE C

DRAWING No.	DETAIL
I.O.S./ 5597	45

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL: STAINLESS STEEL 316 S16	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1
CHECKED			
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF	
DRAWN N.JIMMINS	DIMENSIONS IN m.m.	SCALE 2:1	DO NOT SCALE

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			RE-DRAWN ON COMPUTER	2	15-12-92
			CERTIFIED	1	19-6-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE: BODY, SEA TEMPERATURE

DRAWING No. I.O.S./ 5597 DETAIL 45

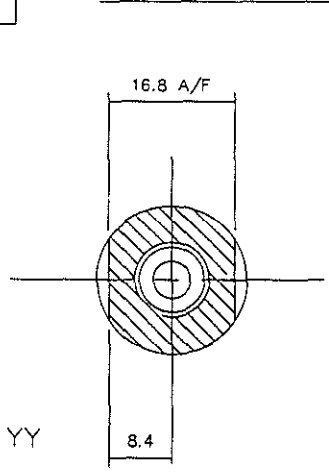
SIZE C

DRAWING No.	DETAIL
I.O.S./ 5597	46

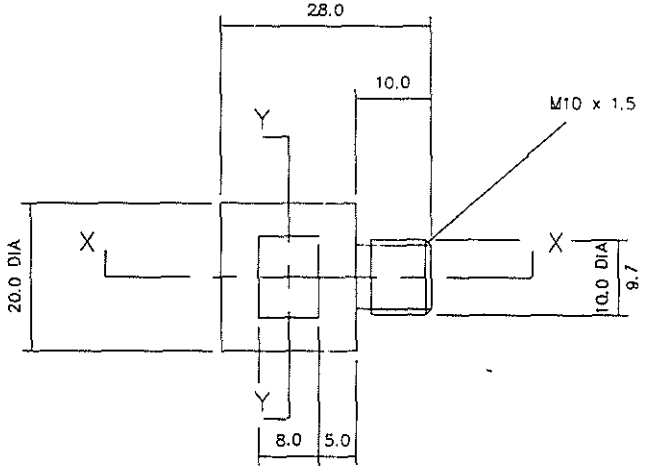
THIRD ANGLE PROJECTION

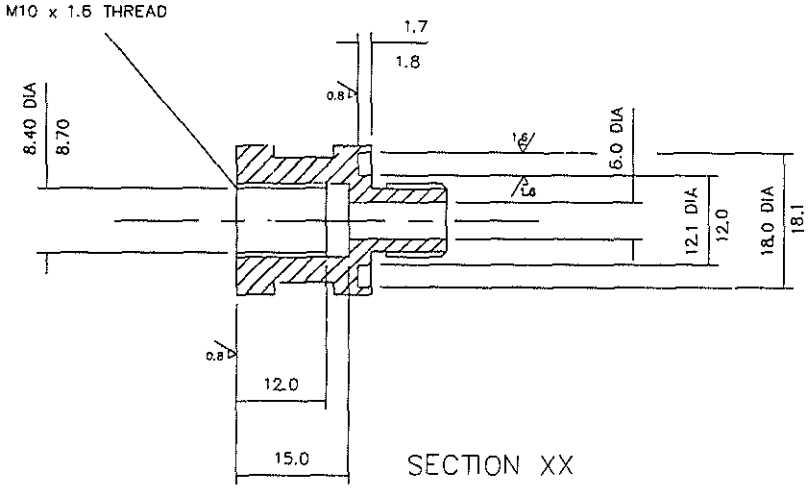
FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



SECTION YY



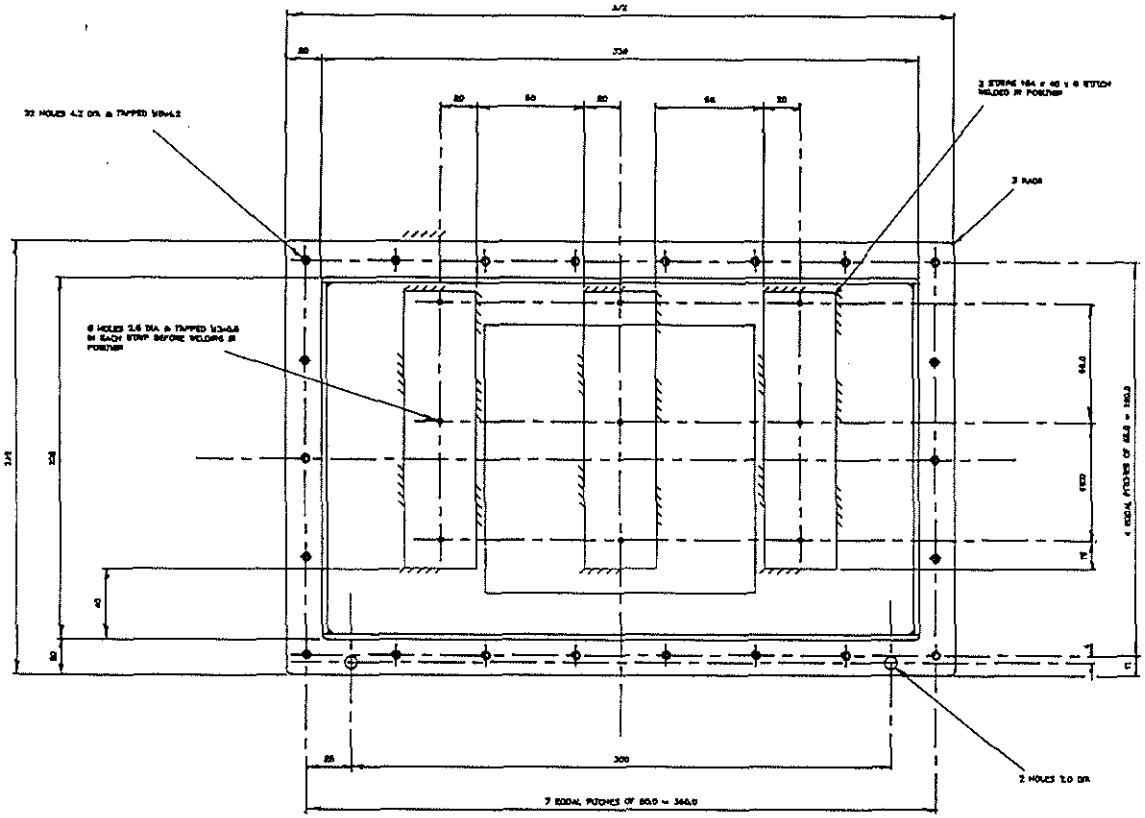


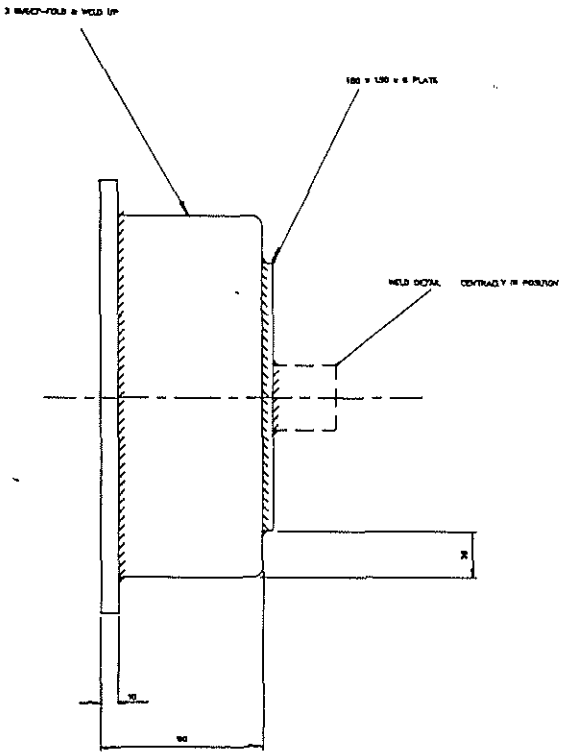
SECTION XX

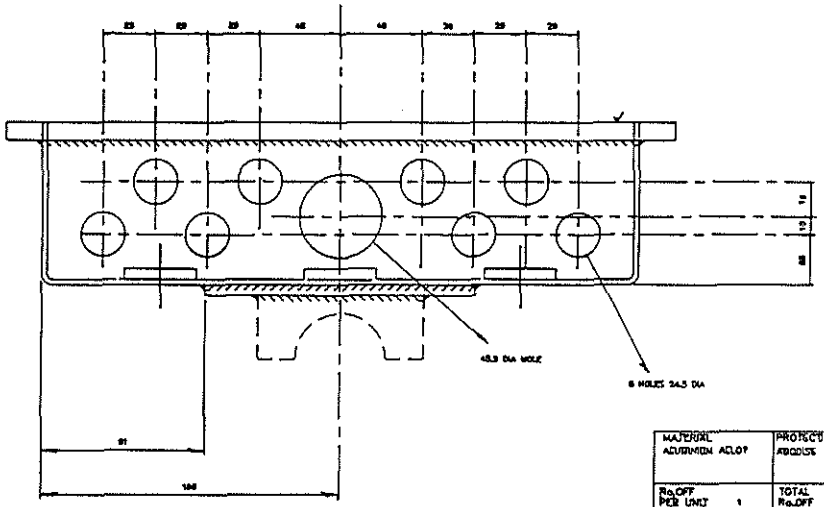
REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S							
CHECKED	MATERIAL NYLATRON GSM	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1		RE-DRAWN ON COMPUTER	2	16-12-92
TRACED				AMENDMENT	ISSUE DATE	AMENDMENT	ISSUE DATE
						CERTIFIED	1 19-6-91
DRAWN N.J.MINNS	No.OFF PER UNIT 2	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES			
	DIMENSIONS IN m.m.	SCALE 2:1	DO NOT SCALE	TITLE INSULATOR, AIR TEMPERATURE SENSOR		DRAWING No. I.O.S./ 5597	DETAIL 46

SIZE C







REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED ±0.5	
No OFF PER UNIT 1	TOTAL No OFF		
DIMENSIONS IN mm.	SCALE 1:1	DO NOT SCALE	

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			ORIGINATED	1	27-8-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE MASTHEAD JUNCTION BOX

DRAWING No. L.O.S./C5587 DETAIL 47

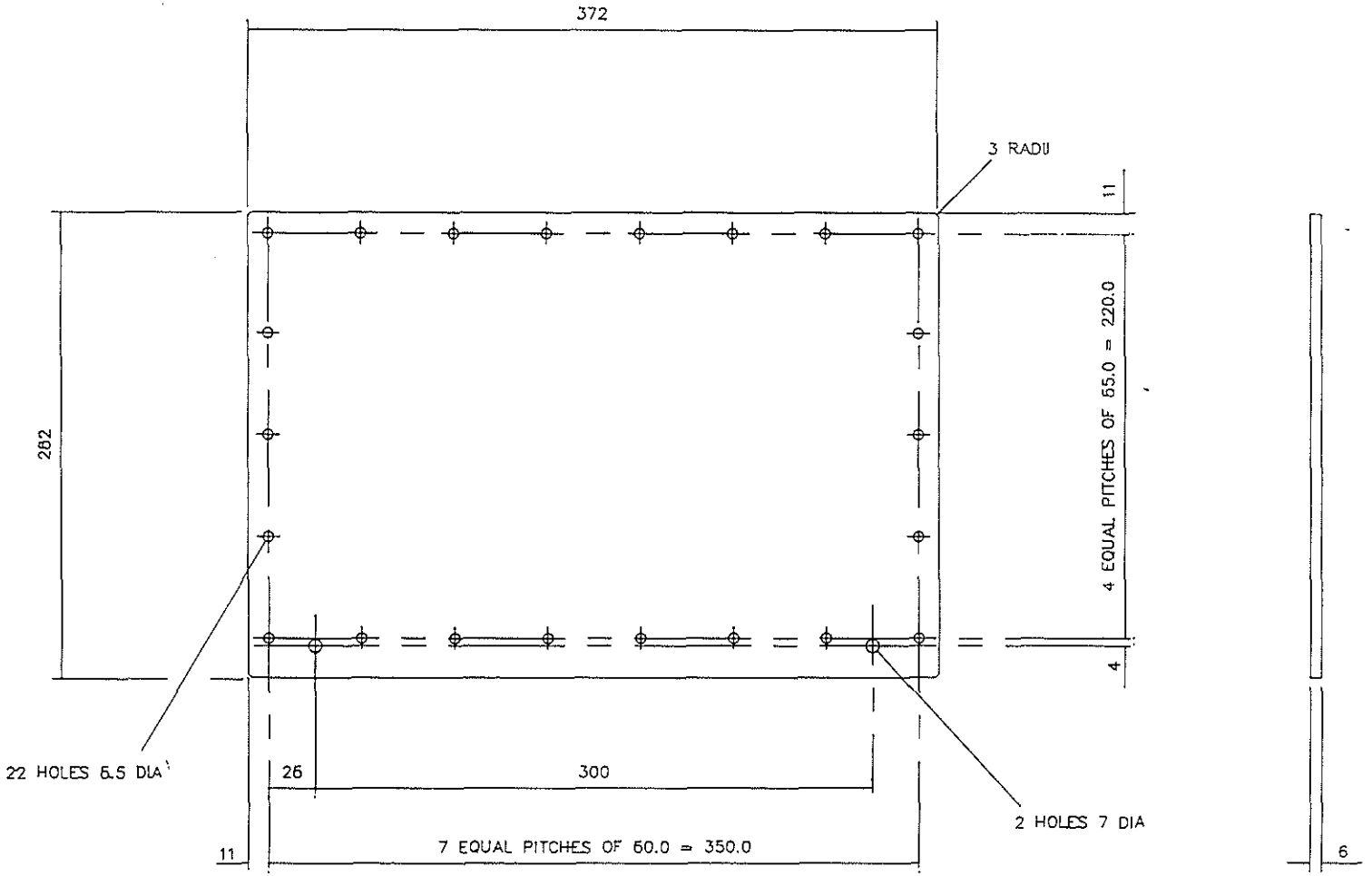
SIZE A

DRAWING No.	DETAIL
I.O.S./ C5597	48

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

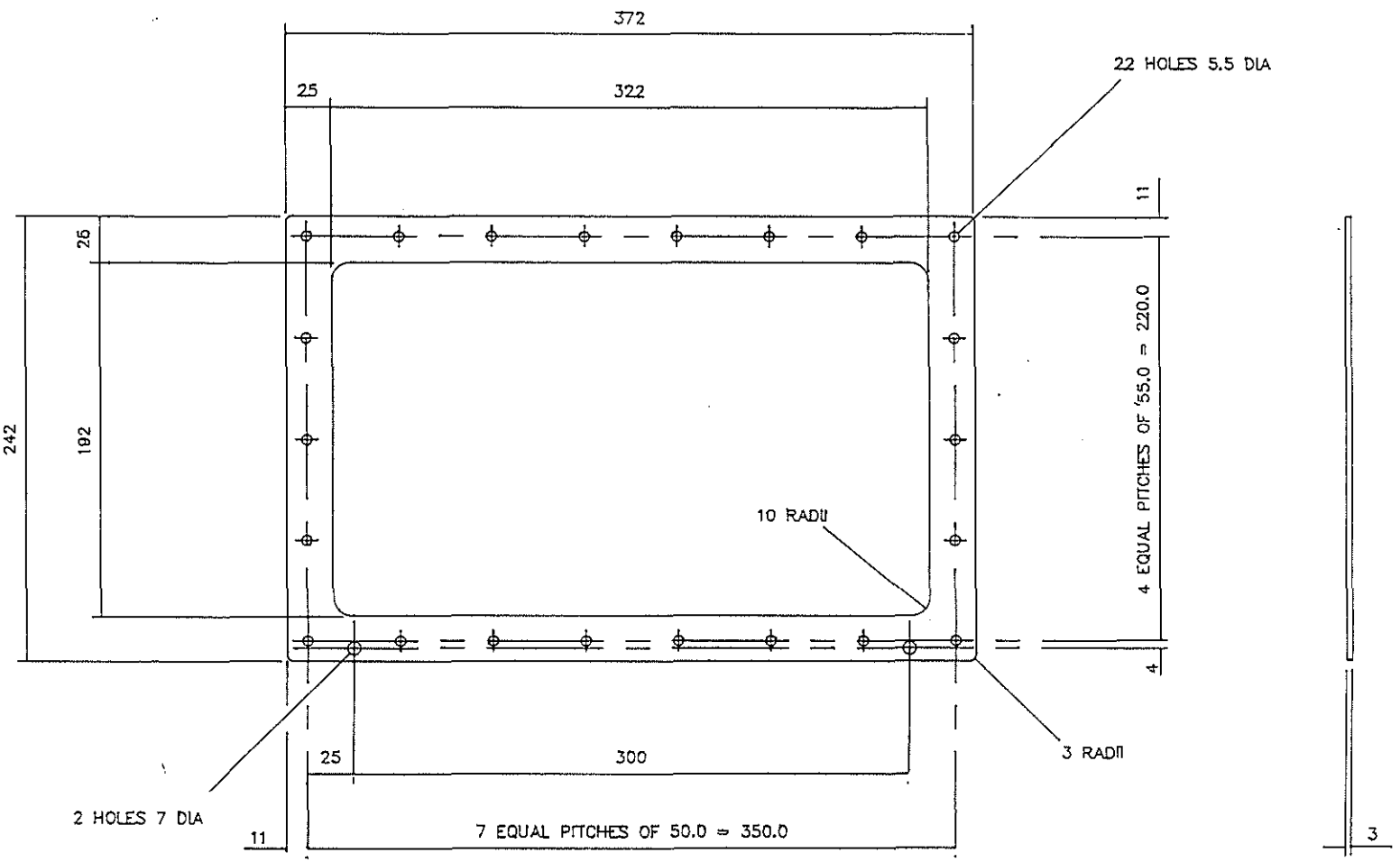
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:				RE-DRAWN ON COMPUTOR	2	28-8-91
CHECKED	ALUMINIUM ALLOY	ANODISE	± 0.5	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	5-6-91
	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN NTIMMINS	DIMENSIONS IN m.m.	SCALE 1:2	DO NOT SCALE	TITLE MASTHEAD JUNCTION BOX LID			DRAWING No. I.O.S./ C5597		DETAIL 48
SIZE C									

DRAWING No.	DETAIL
I.O.S./C5597	49

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

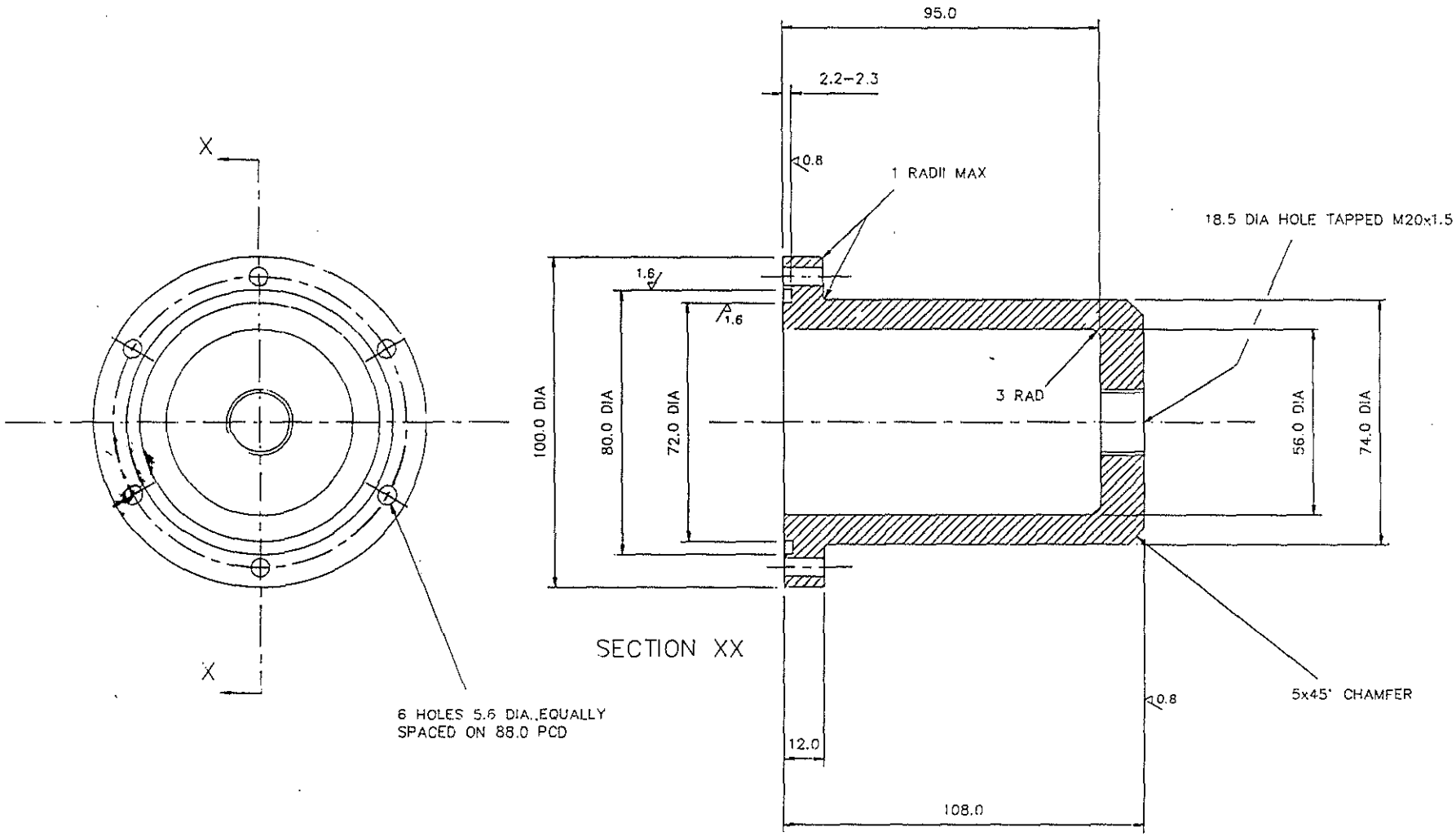
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:			RE-DRAWN ON COMUTOR	2	28-6-91
CHECKED	NEOPRENE 60-60 BSH		± 1	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	6-6-91
DRAWN NTTUMMINS	No.OFF PER UNIT 1	TOTAL No.OFF	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 1:2		TITLE MASTHEAD JUNCTION BOX GASKET			DRAWING No. I.O.S./C5597		DETAIL 49
SIZE C									

DRAWING No. I.O.S./C5597 DETAIL 50

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

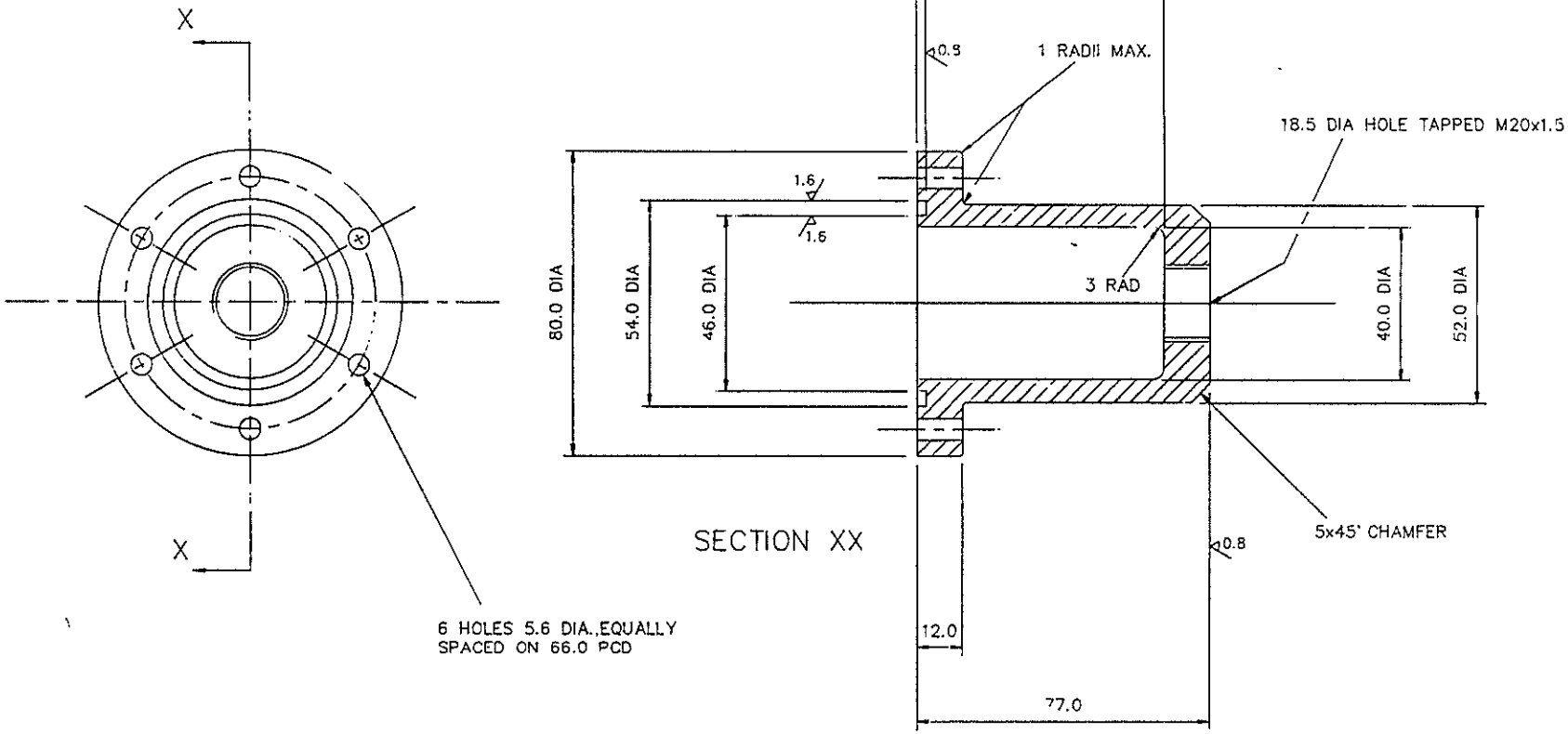
O/No. W/S							
CHECKED	MATERIAL POLYPROPYLENE	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.5			RE-DRAWN ON COMPUTOR	2	1-8-91
TRACED				AMENDMENT	ISSUE DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 1	TOTAL No.OFF				CERTIFIED	1	6-6-91
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES				
SIZE C				TITLE TOP HAT FOR CONNECTOR SERIES 5		DRAWING No. I.O.S./C5597		DETAIL 50

DRAWING No.	DETAIL
I.O.S./C5597	51

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL POLYPROPYLENE	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.5
CHECKED			
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF	
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE
SIZE C			

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			RE-DRAWN ON COMPUTOR	2	1-8-91
			CERTIFIED	1	6-6-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

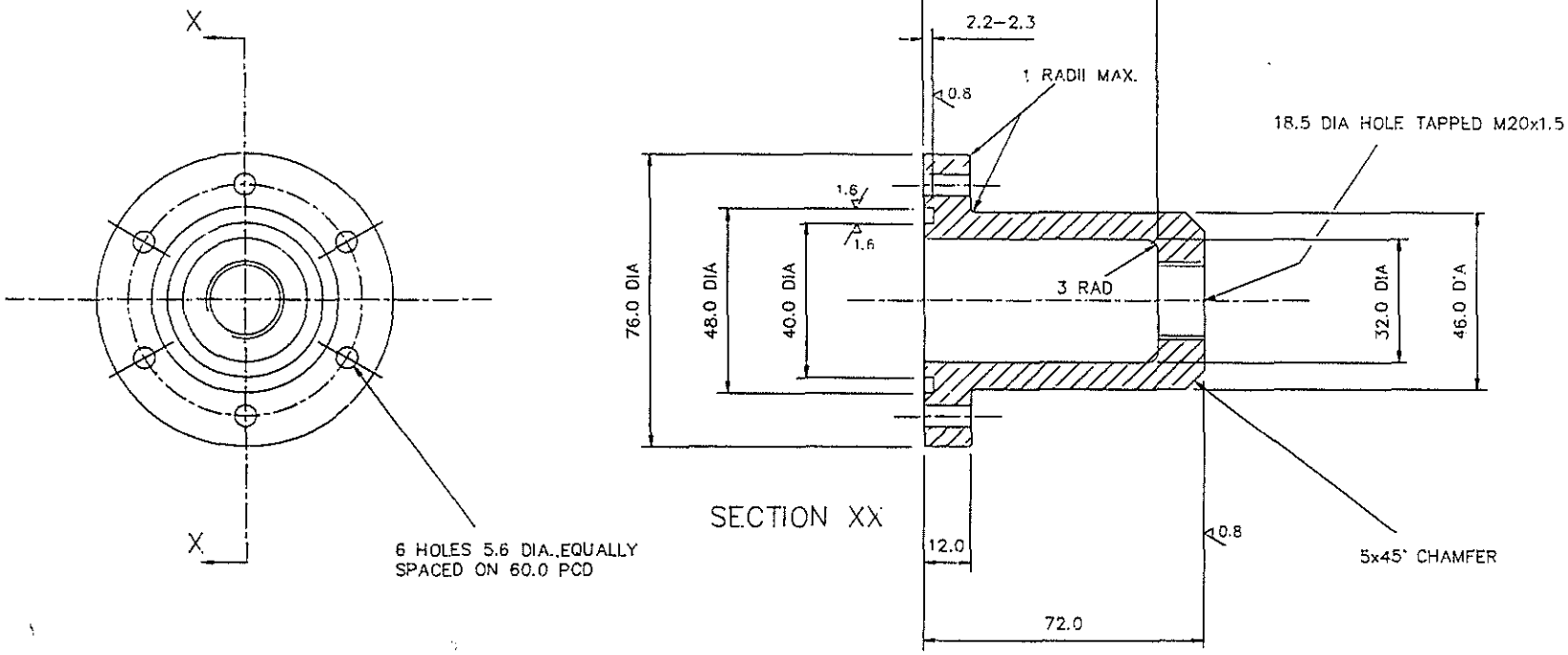
TITLE	DRAWING No.	DETAIL
TOP HAT FOR CONNECTOR SERIES 4	I.O.S./C5597	51

DRAWING No.	DETAIL
I.O.S./C5597	52

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S			
CHECKED	MATERIAL POLYPROPYLENE	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.5
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF	
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE
SIZE C			

AMENDMENT	ISSUE	DATE
RE-DRAWN ON COMPUTOR	2	2-8-91
CERTIFIED	1	7-6-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

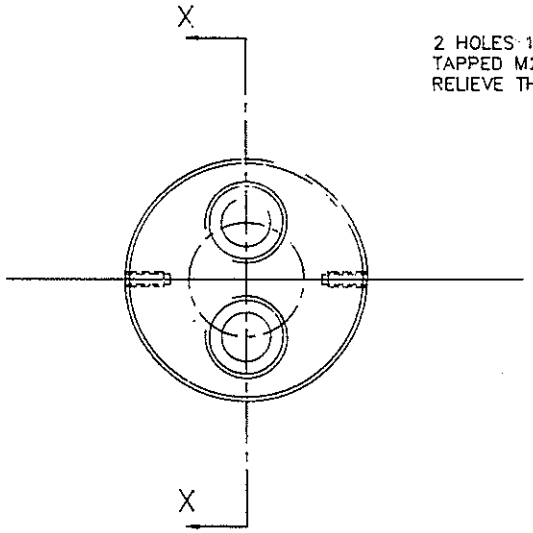
TITLE	DRAWING No.	DETAIL
TOP HAT FOR CONNECTOR SERIES 3	I.O.S./C5597	52

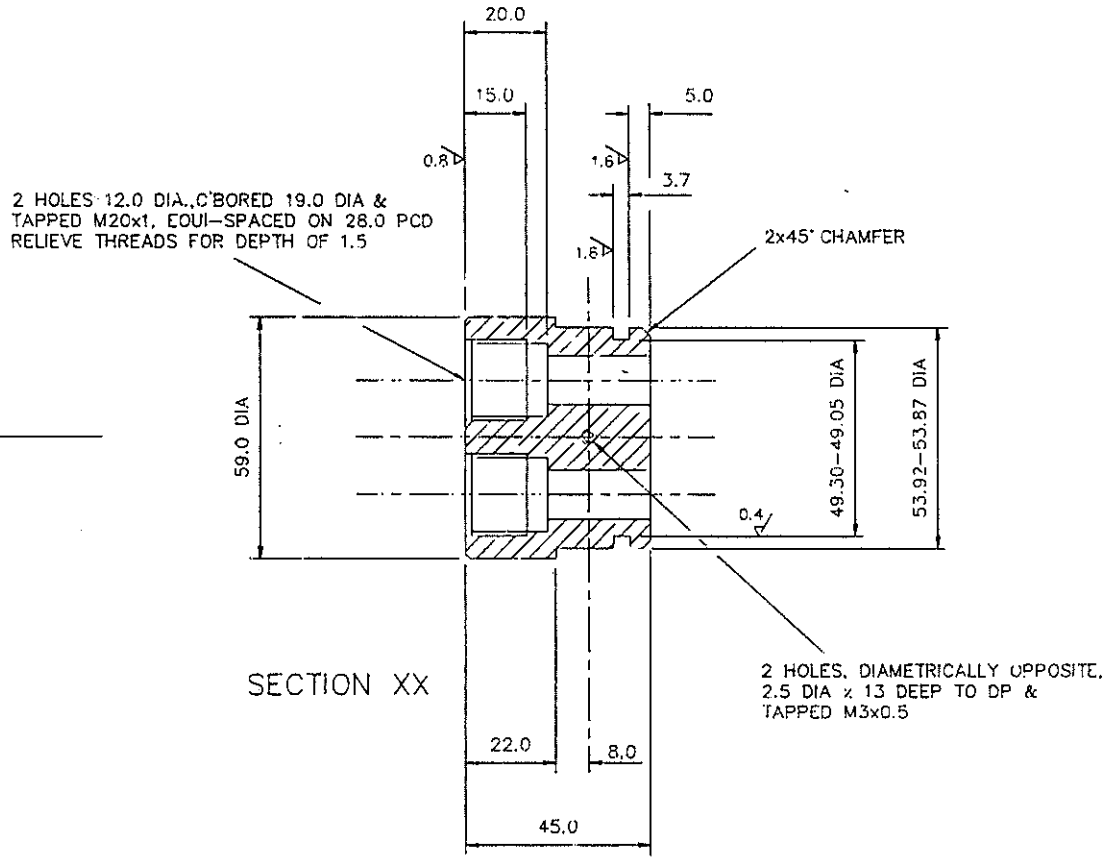
DRAWING No.	DETAIL
I.O.S./C5597	53

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON





SECTION XX

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL: ALUMINIUM ALLOY HE30	PROTECTIVE FINISH: ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.5
CHECKED			
TRACED	No.OFF PER UNIT 1	TOTAL No.OFF	
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE

AMENDMENT	ISSUE	DATE

AMENDMENT	ISSUE	DATE
DRAWN ON COMPUTOR	2	6-8-91
CERTIFIED	1	10-6-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE	DRAWING No.	DETAIL
ANEMOMETER BASE ADAPTER.	I.O.S./C5597	53

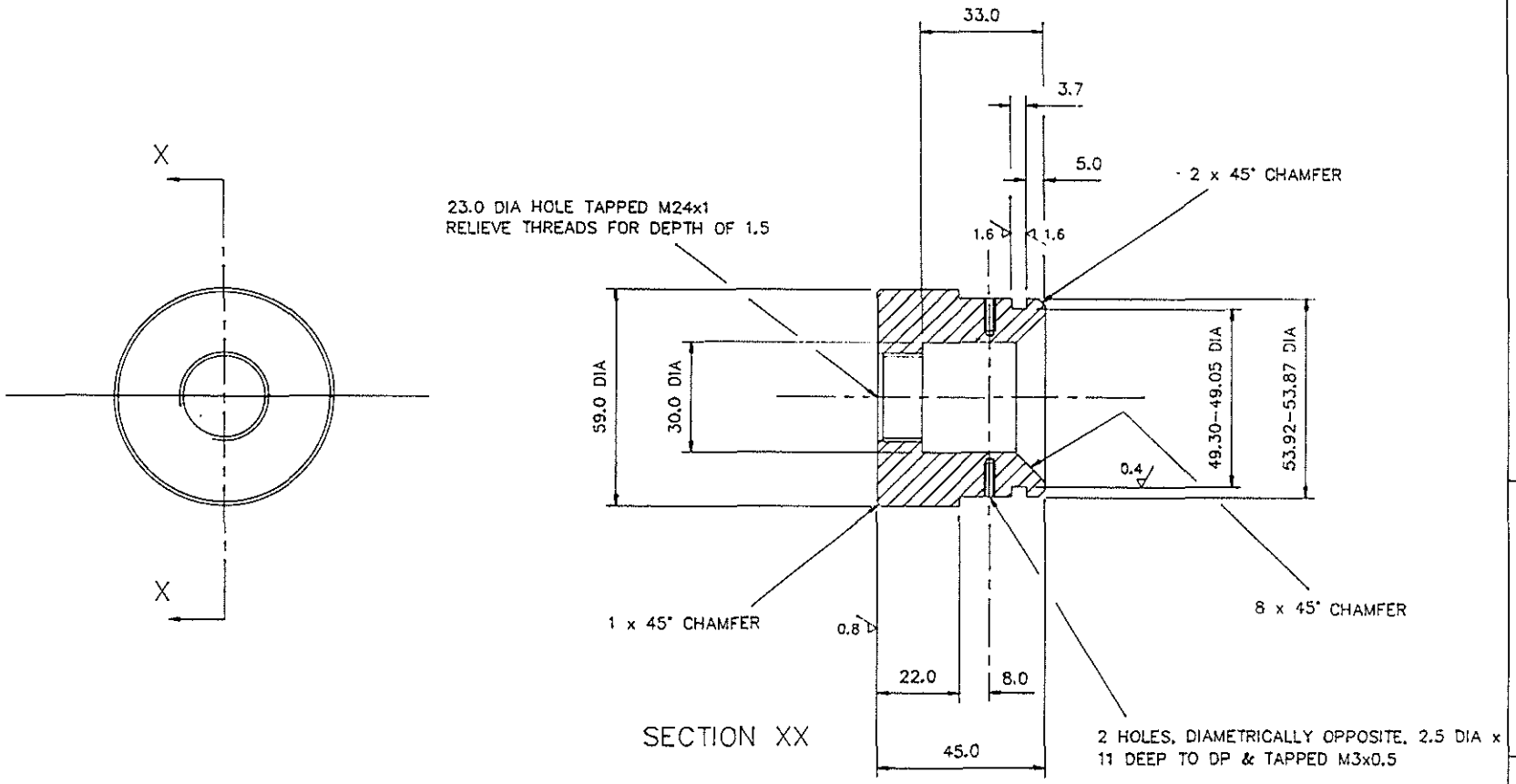
SIZE C

DRAWING No. I.O.S./ C5597 DETAIL 54

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

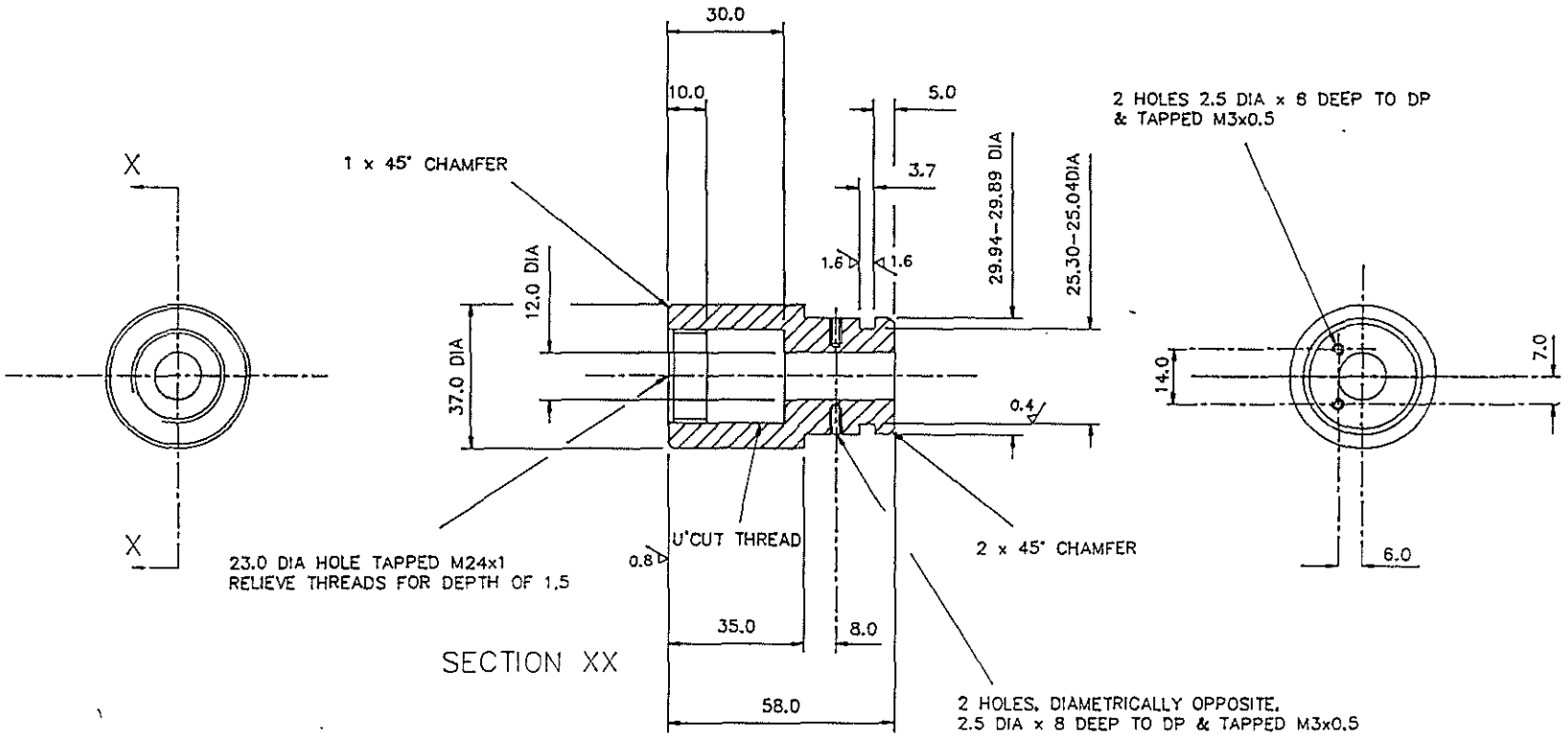
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:				
CHECKED	ALUMINIUM ALLOY HE30	ANODISE				DRAWN ON COMPUTOR	2 7-8-91
TRACED			± 0.5	AMENDMENT	ISSUE DATE	AMENDMENT	ISSUE DATE
	No.OFF PER UNIT 2	TOTAL No.OFF				CERTIFIED	1 10-6-91
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES			
SIZE C				TITLE DCPA BASE ADAPTER		DRAWING No. I.O.S./ C5597	DETAIL 54

DRAWING No.	DETAIL
I.O.S./C5597	55

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

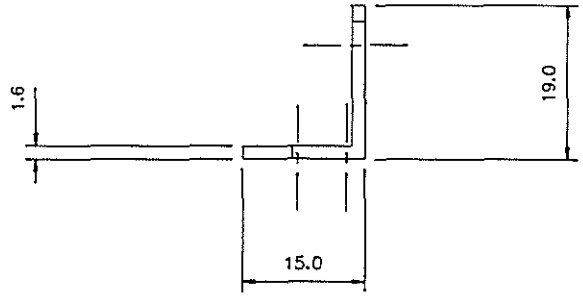
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:					
CHECKED	ALUMINIUM ALLOY HE30	ANODISE				RE-DRAWN ON COMPUTOR	2	8-8-91
TRACED			± 0.5	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 2	TOTAL No.OFF					CERTIFIED	1	11-6-91
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE C				TITLE ANEMOMETER TUBE ADAPTER PLUG			DRAWING No. I.O.S./C5597		DETAIL 55

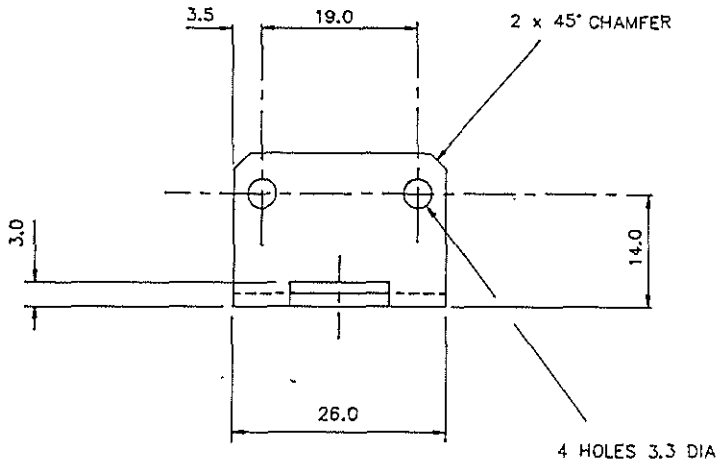
DRAWING No.	DETAIL
I.O.S./C5597	56

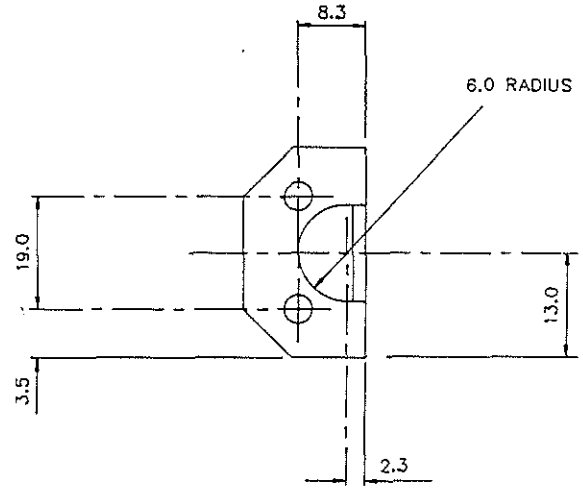
THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON







REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

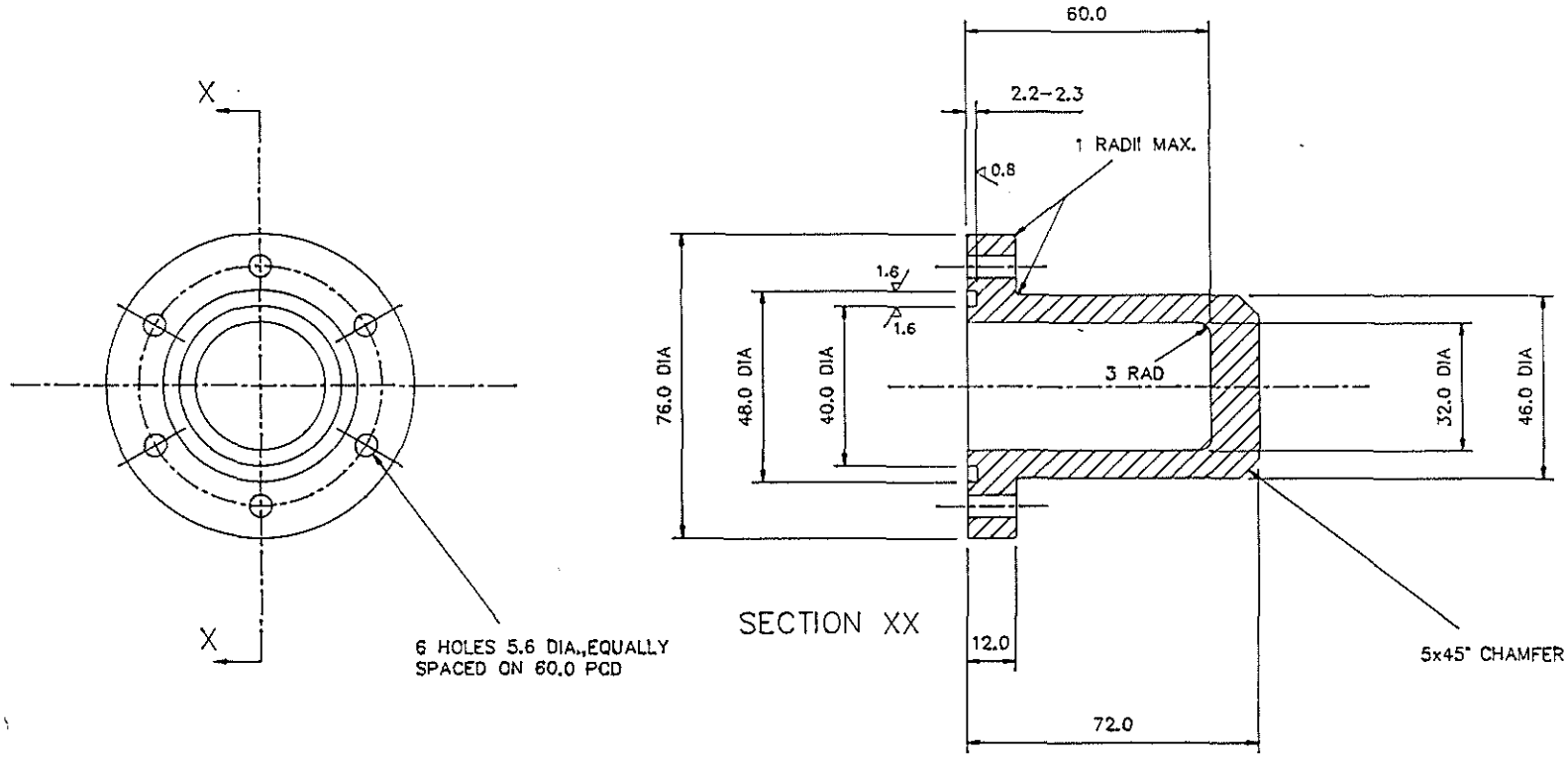
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:					
CHECKED	ALUMINIUM ALLOY	ANODISE	± 0.5			RE-DRAWN ON COMPUTOR	2	9-8-91
TRACED				AMENDMENT	ISSUE	DATE AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 1	TOTAL No.OFF				CERTIFIED	1	21-6-91
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 2:1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES				
SIZE C				TITLE PCB BRACKET			DRAWING No. I.O.S./C5597	DETAIL 56

DRAWING No.	DETAIL
I.O.S./C5597	57

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:						
CHECKED	POLYPROPYLENE			AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED			± 0.5				CERTIFIED	1	2-8-91
	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE COVER FOR CONNECTOR SERIES 3			DRAWING No. I.O.S./C5597		DETAIL 57

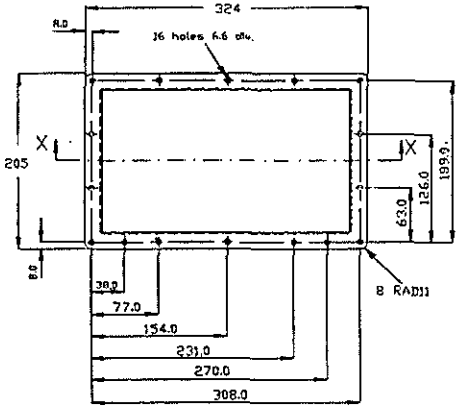
SIZE C

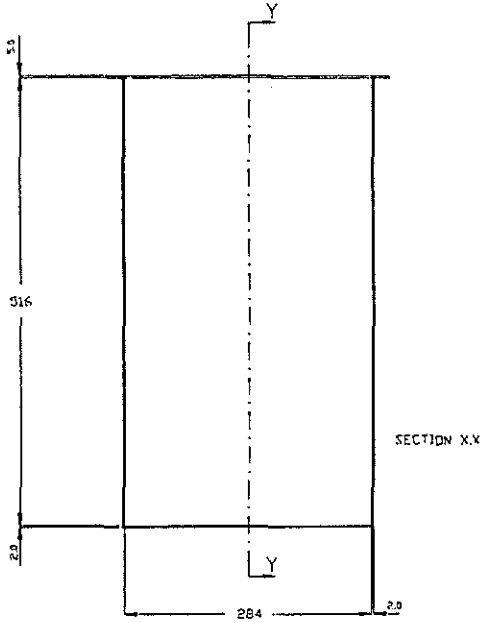
DRAWING No.	DETAIL
I.O.S./ C5597	60

THIRD ANGLE PROJECTION

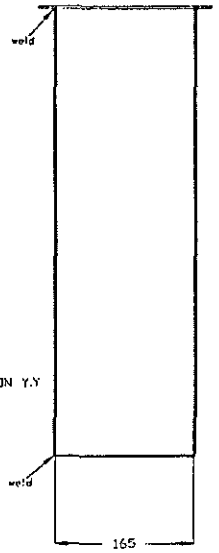
FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON





SECTION X.X



SECTION Y.Y

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

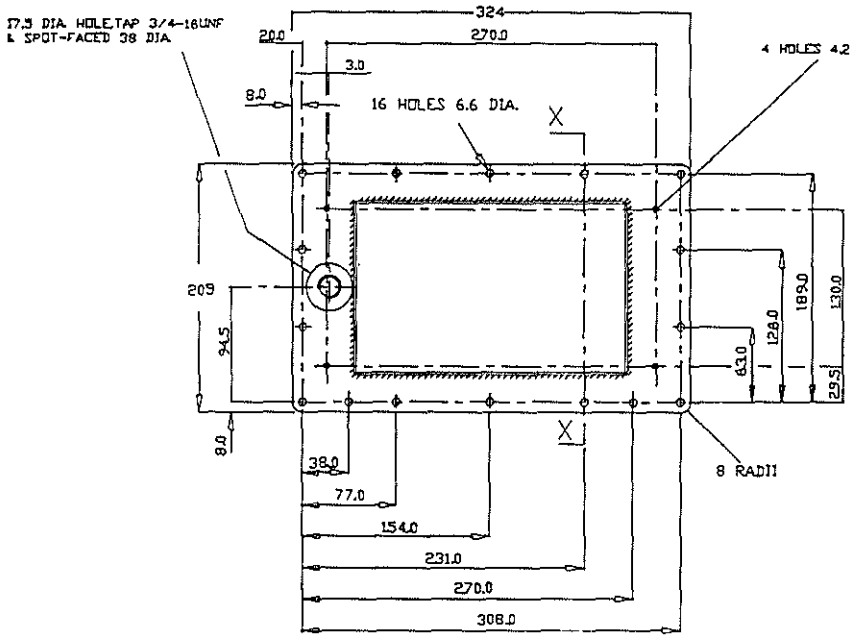
D/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED				
CHECKED	ALUMINIUM ALLOY HE-30	ANODISE	±0.5			WAS 322x202, NOW324x205 O/ALL	2	5-6-91
TRACED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 1	TOTAL No.OFF					CERTIFIED	1	18-4-91
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE C				TITLE METEOSAT BOX			DRAWING No. I.O.S./C5597	DETAIL 60	

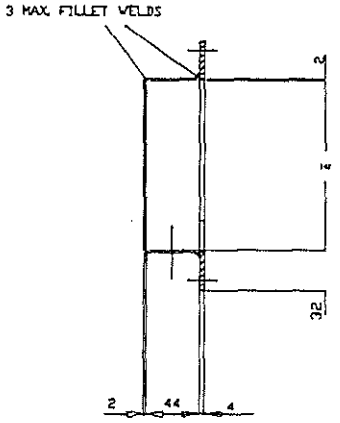
DRAWING No. I.O.S./ C5597 DETAIL 61

THIRD ANGLE PROJECTION

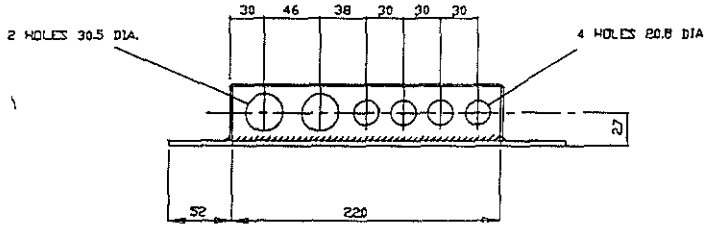
FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc,SEE B.S.308.

USED ON





SECTION XX



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

					TOP-HAT SECTION ADDED	3	5-6-91
					VAS 322x202, NOW 324x205	2	2-8-91
				HEIGHT REDUCED BY 13, 4 HOLES 20.5 DIA	4	20-8-91	AMENDMENT	ISSUE	DATE
				AMENDMENT	ISSUE	DATE	CERTIFIED	1	18-4-91

O/No. W/S	MATERIAL ALUMINIUM ALLOY HE-30	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED. ±0.5
CHECKED			
TRACED	No.OFF PER UNIT 1	TOTAL No.OFF	
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE METEOSAT BOX LID

DRAWING No. I.O.S./ C5597 DETAIL 61

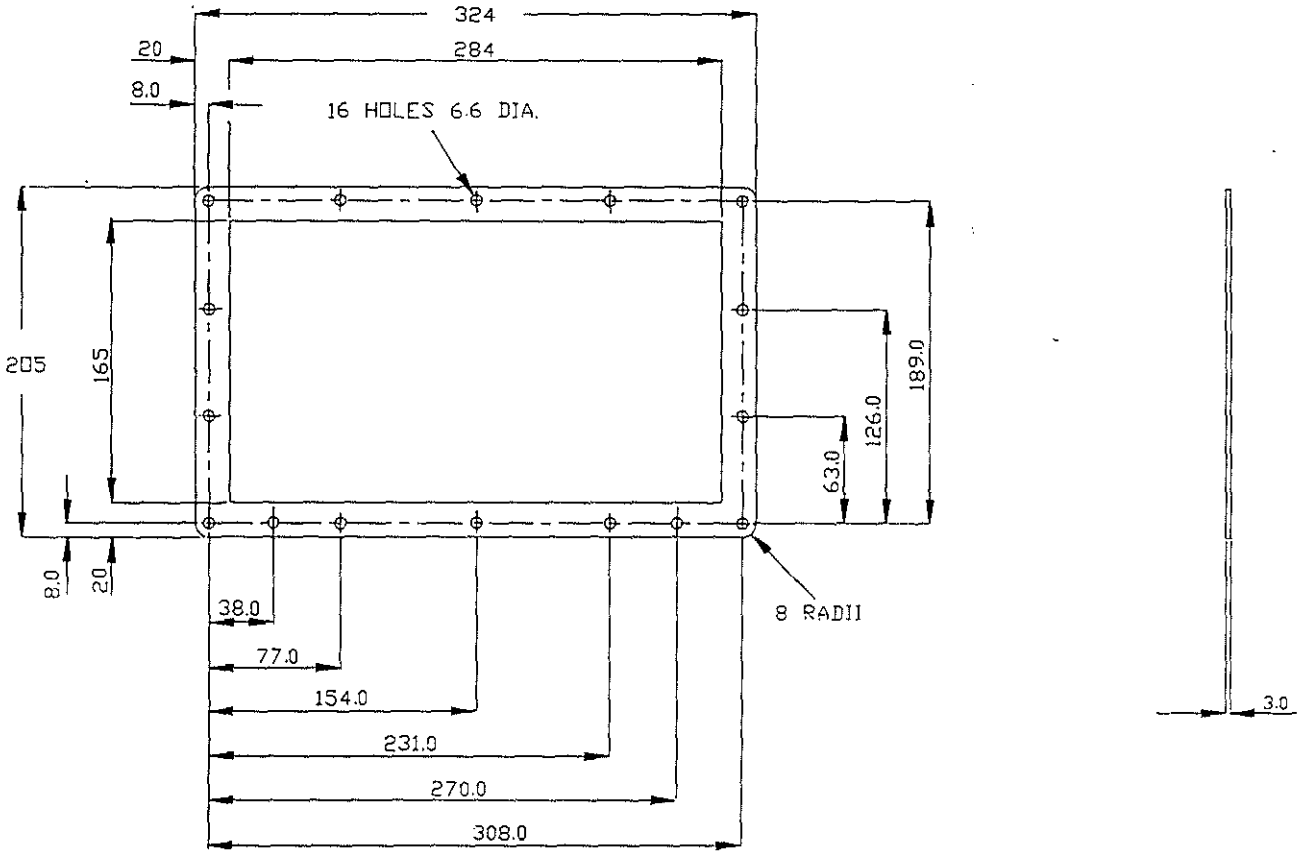
SIZE C

DRAWING No.	DETAIL
I.O.S./C5597	62

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED ±1				WAS 322x202, NOW 324x205	2	5-6-91
CHECKED	NEOPRENE 40-50 BSH			AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	18-4-91
	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE METEOSAT BOX GASKET			DRAWING No. I.O.S./C5597		DETAIL 62

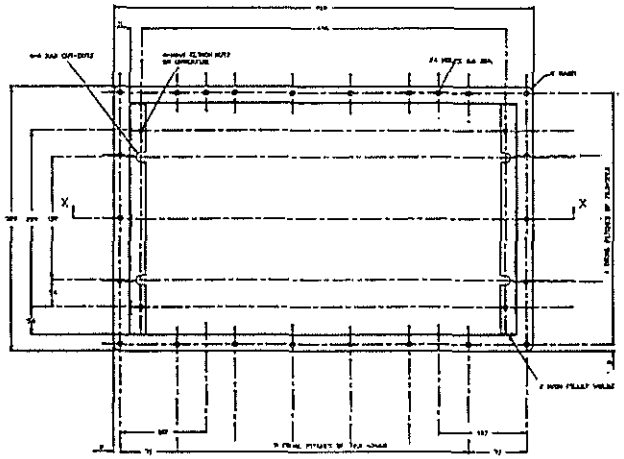
SIZE C

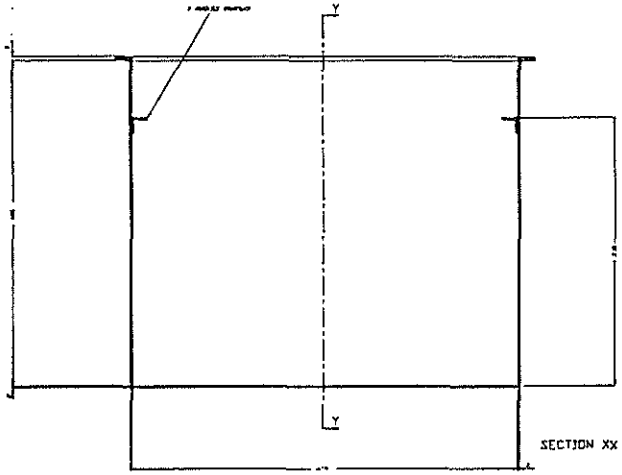
DRAWING No.	DETAIL
I.O.S./ C5597	63

THIRD ANGLE PROJECTION

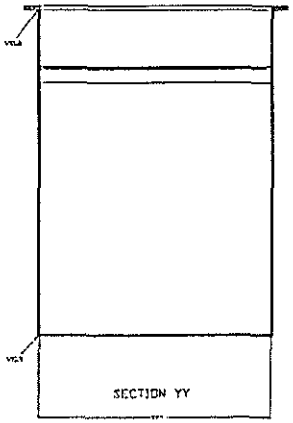
FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON





SECTION XX



SECTION YY

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

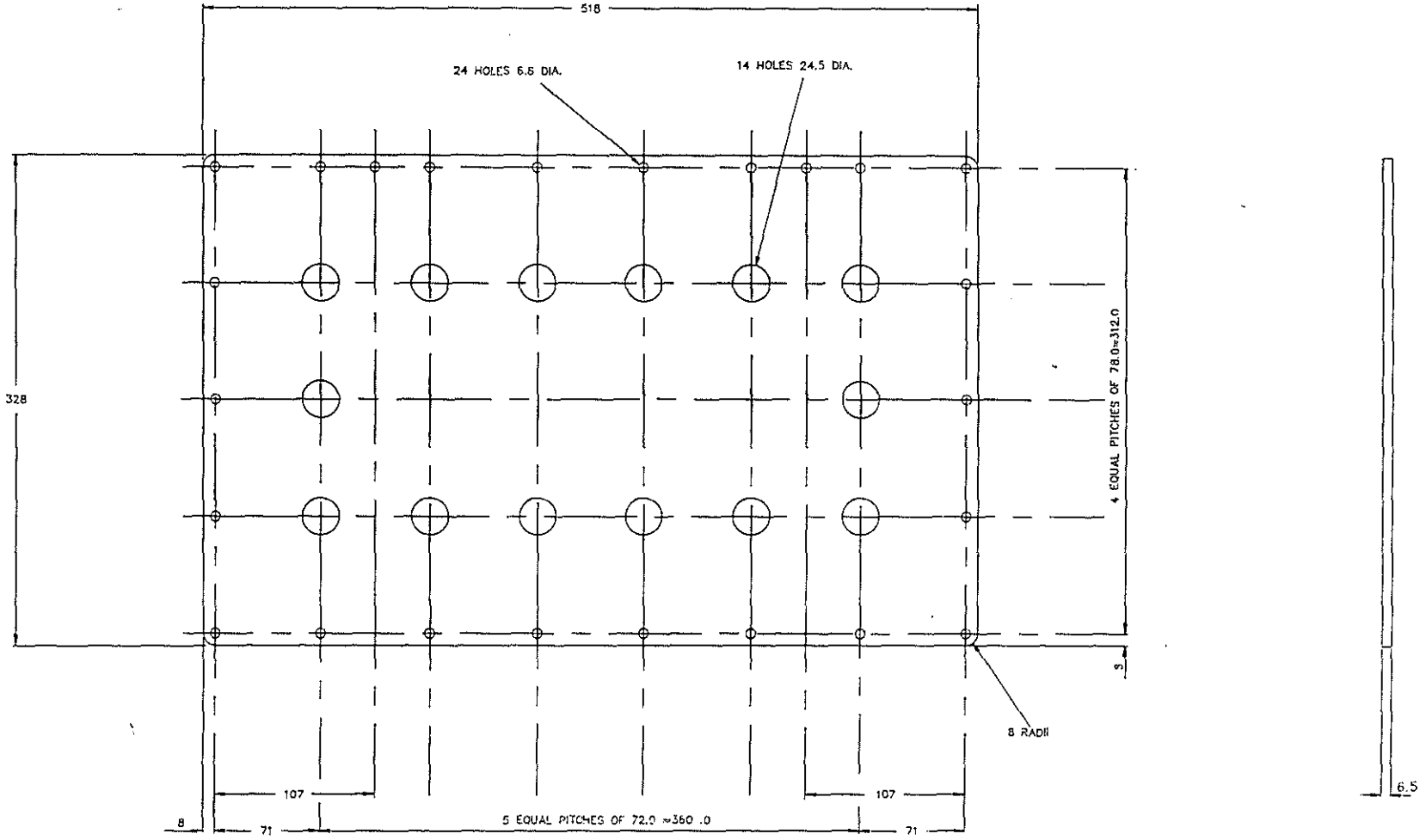
O/No. W/S	MATERIAL ALUMINIUM ALLOY HE-30	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ±0.5			DRAWING RE-NUMBERED. WAS C5597 43	2	5-6-91
CHECKED				AMENDMENT	ISSUE DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 1	TOTAL No.OFF				CERTIFIED	1	2-5-91
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES				
SIZE C				TITLE C.P.U. HOUSING BOX		DRAWING No. I.O.S./ C5597		DETAIL 63

DRAWING No.	DETAIL
I.O.S./C5597	64

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:
CHECKED	ALUMINIUM ALLOY HE-30	ANODISE	±0.5
TRACED	No.OFF PER UNIT 1	TOTAL No.OFF	
DRAWN NTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE
SIZE C			

AMENDMENT	ISSUE	DATE
14 x 24.5 DIA. HOLES ADDED	3	11-7-91
DRAWING RE-NUMBERED. WAS C5597 44	2	5-6-91
CERTIFIED	1	7-5-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE: C.P.U. HOUSING LID

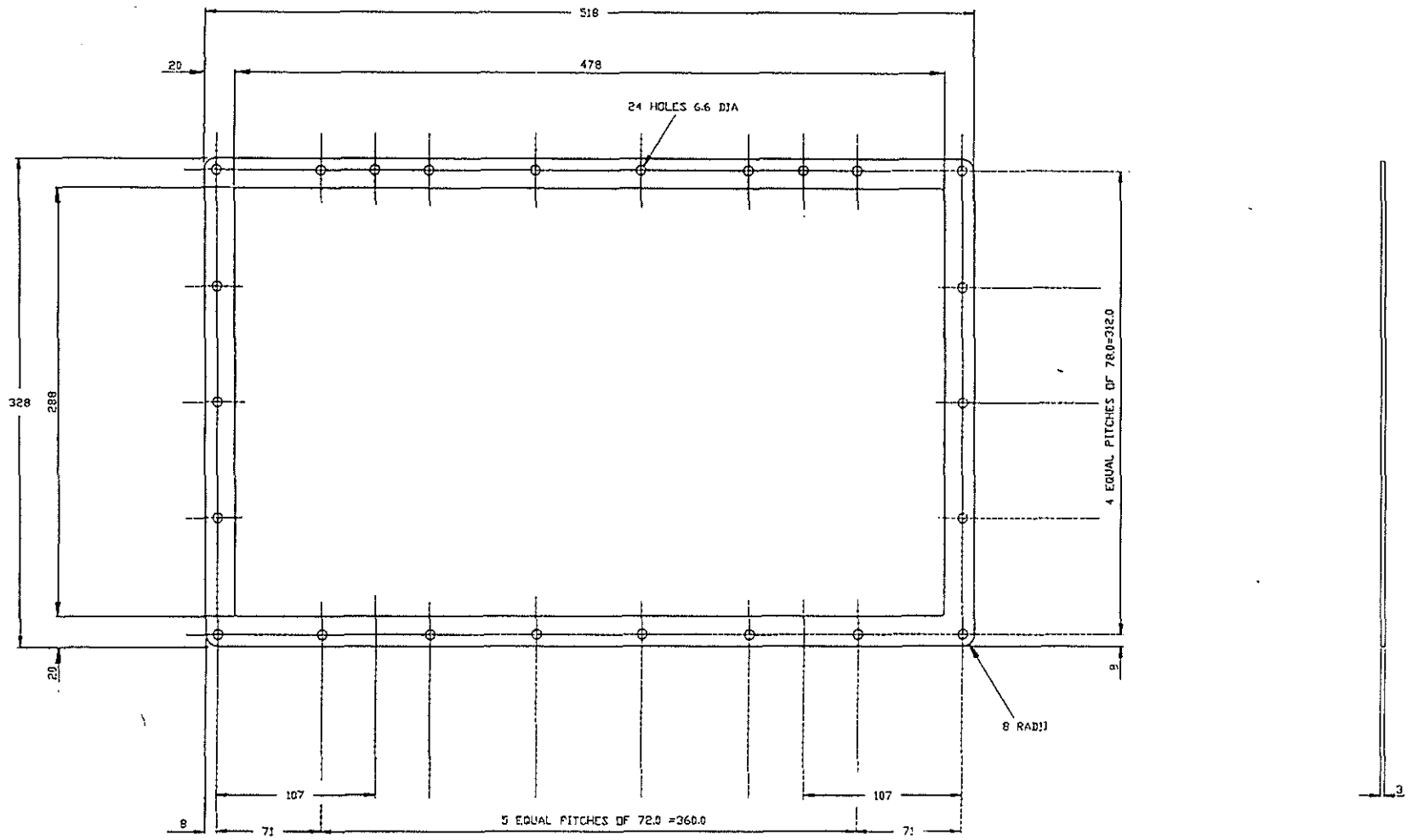
DRAWING No. I.O.S./C5597 DETAIL 64

DRAWING No.	DETAIL
I.O.S./ C5597	65

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

D/No. W/S	MATERIAL NEOPRENE 40-50 BSH	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ±1		
CHECKED				DRAWING RE-NUMBERED. WAS C5597 45	2 5-6-91
TRACED	No.OFF PER UNIT 1	TOTAL No.OFF		AMENDMENT / ISSUE / DATE / AMENDMENT / ISSUE / DATE	
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	CERTIFIED 1 7-5-91	

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE	DRAWING No.	DETAIL
C.P.U. HOUSING GASKET	I.O.S./C5597	65

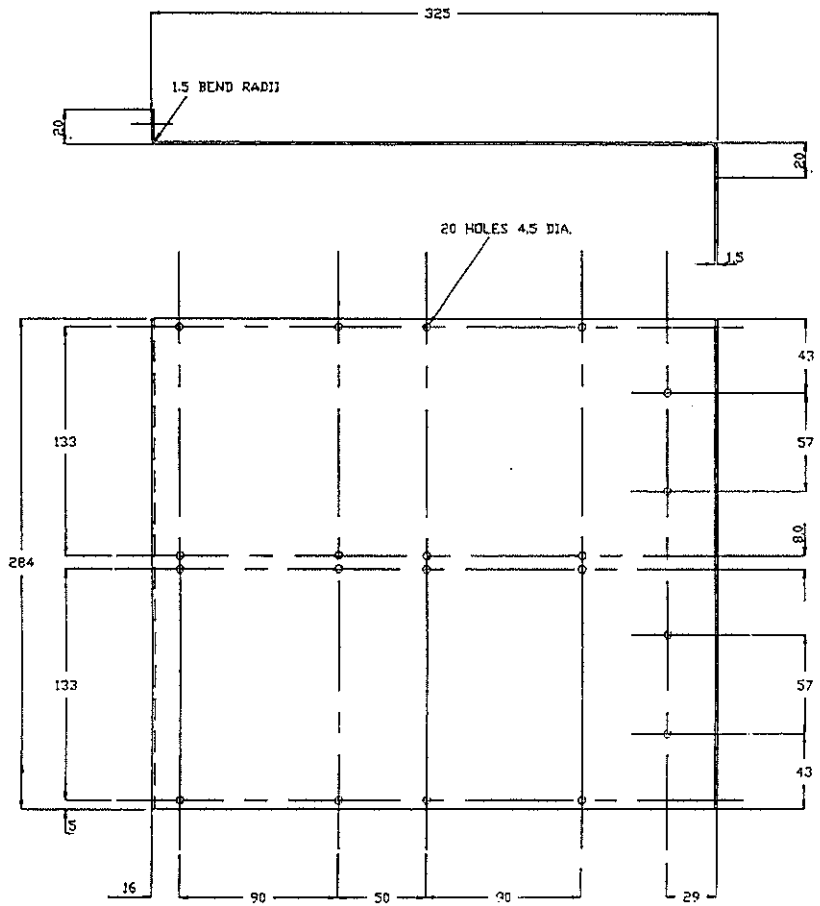
SIZE C

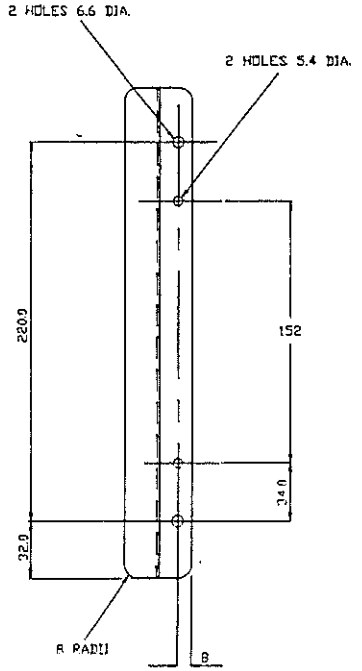
DRAWING No. I.O.S./ C5597 DETAIL 66

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON

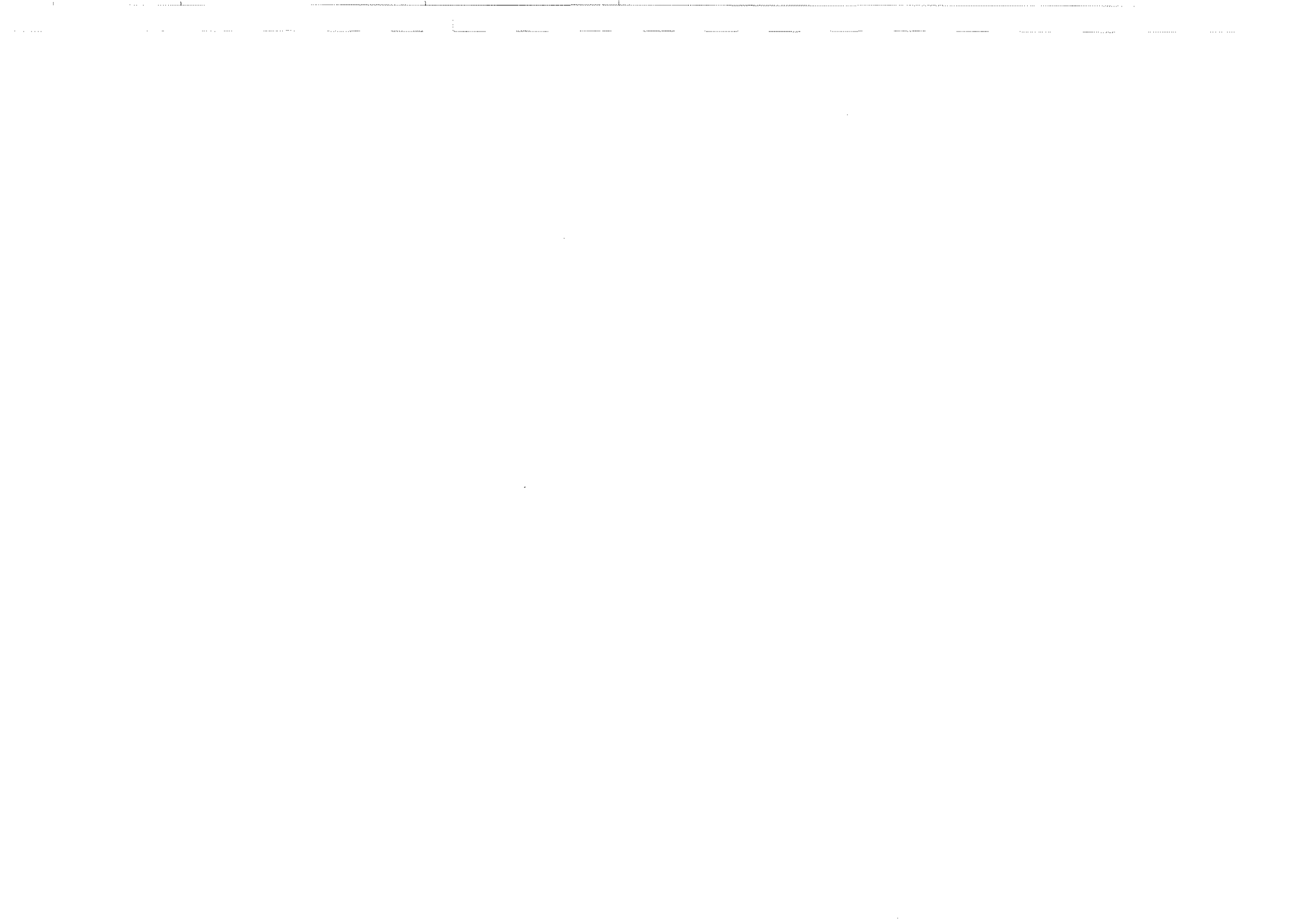




REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ALUMINIUM ALLOY HE-30	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED ±0.5			DRAWING RE-NUMBERED. WAS C5597 46	2	10-6-91
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	13-5-91
DRAWN NTTIMMINS	No.OFF PER UNIT 2	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE PCB CHASSIS SIDE PLATE			DRAWING No. I.O.S./C5597		DETAIL 66

SIZE C

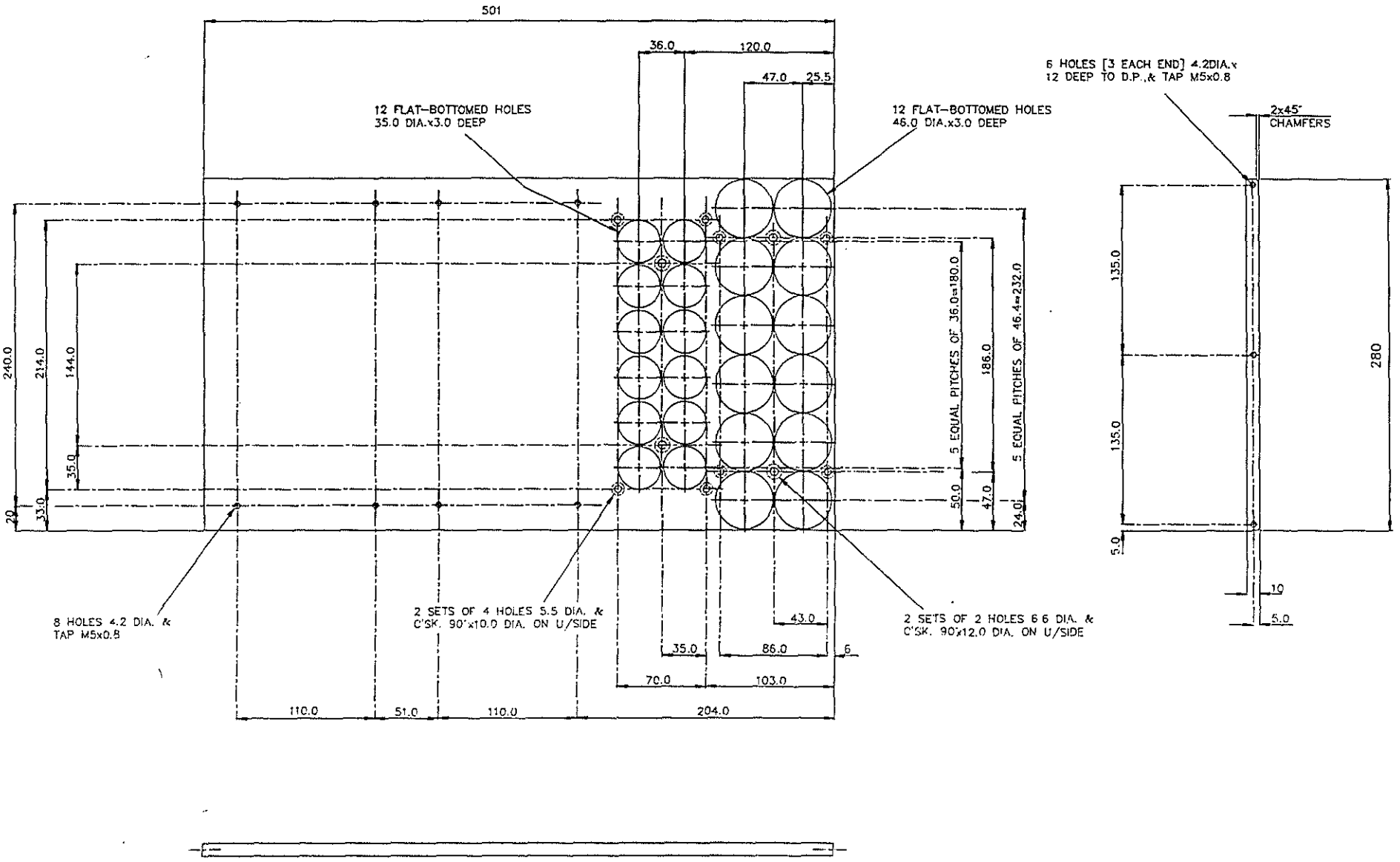


DRAWING No. I.O.S./C5597 DETAIL 67

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED.	
No. OFF PER UNIT 1	TOTAL No. OFF	± 0.5	
DIMENSIONS IN m.m.	SCALE 4:1	DO NOT SCALE	

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			DRAWING RE-NUMBERED WAS D5597-47	2	3-8-81
			SECTIONED	1	3-8-81

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE BASE PLATE

DRAWING No. I.O.S./C5597 DETAIL 67

O/No. W/S

CHECKED

TRACED

DRAWN

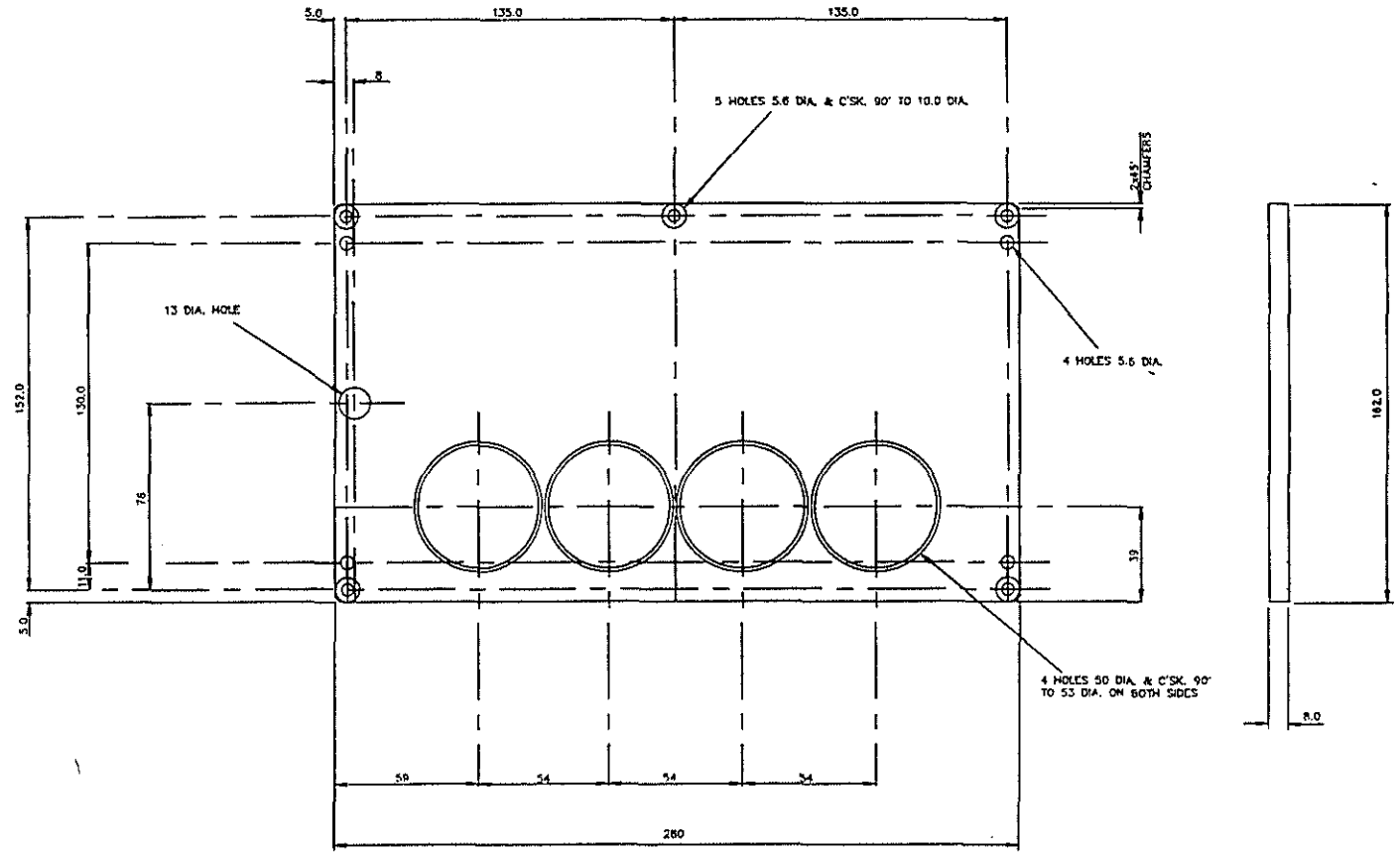
SIZE A

DRAWING No.	DETAIL
I.O.S./ C5597	68

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

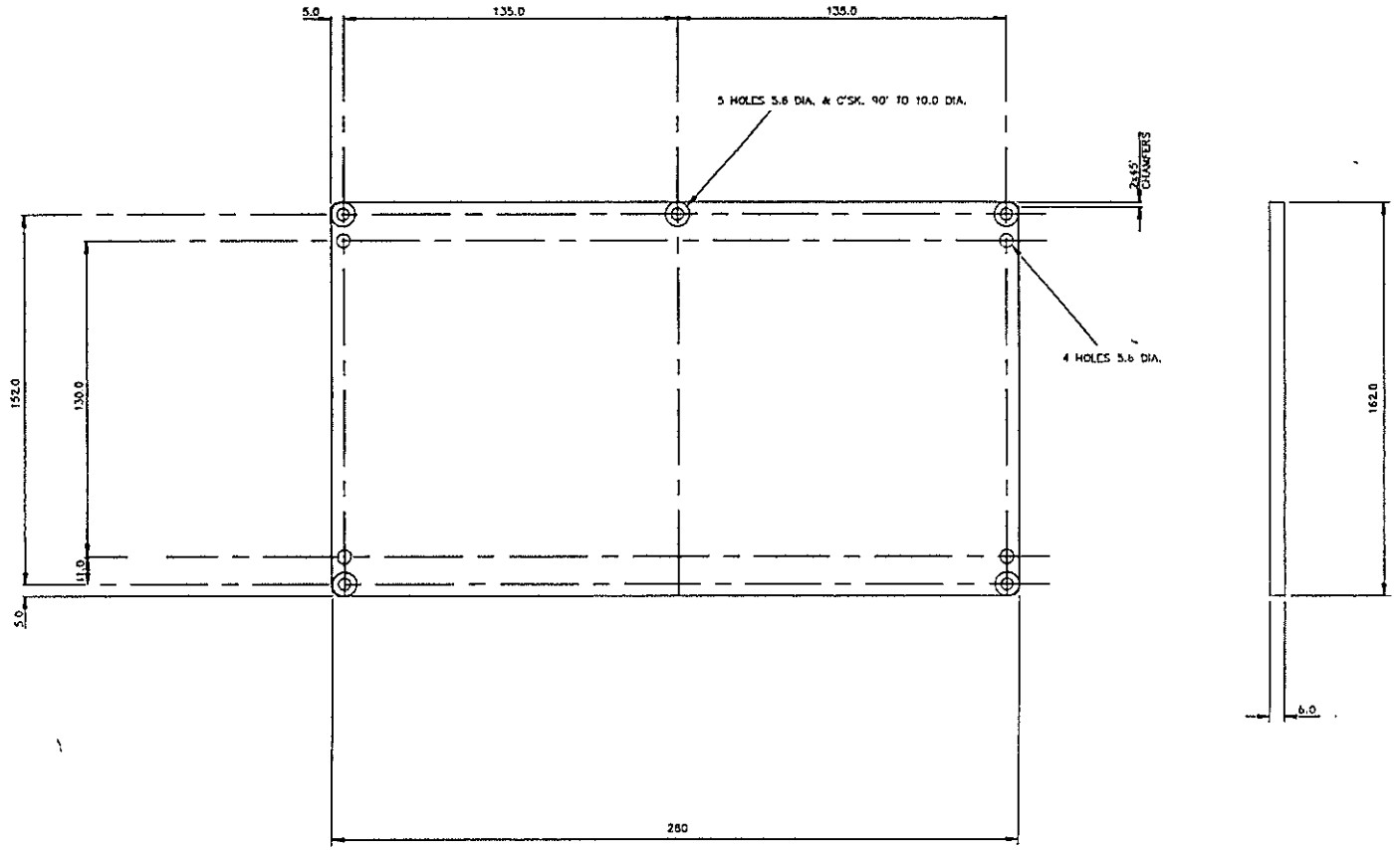
O/No. W/S	MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.5.						
CHECKED									
TRACED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 1	TOTAL No.OFF					CERTIFIED	1	5-6-91
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE D				TITLE TOP PLATE			DRAWING No. I.O.S./ C5597		DETAIL 68

DRAWING No.	DETAIL
I.O.S./ C5597	69

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S			
CHECKED	MATERIAL: ALUMINIUM ALLOY	PROTECTIVE FINISH: ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.5
TRACED	No.OFF PER UNIT 1	TOTAL No.OFF	
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			CERTIFIED	1	5-6-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE	DRAWING No.	DETAIL
BOTTOM PLATE	I.O.S./ C5597	69

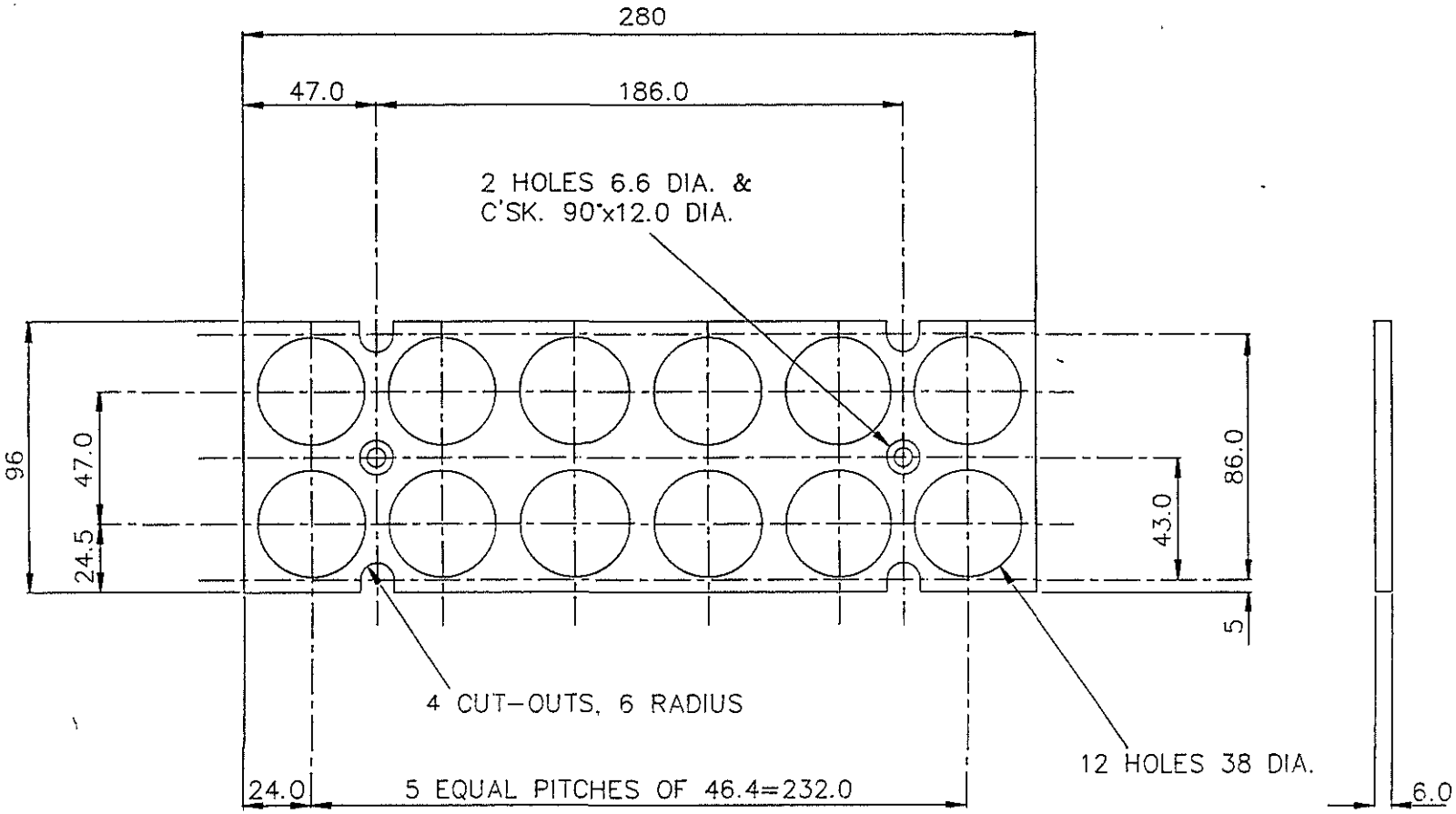
SIZE D

DRAWING No.	DETAIL
I.O.S./C5597	70

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:					
CHECKED	RIGID PVC			AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED			± 0.5				CERTIFIED	1	6-6-91
	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE BATTERY PLATE-A			DRAWING No. I.O.S./C5597		DETAIL 70

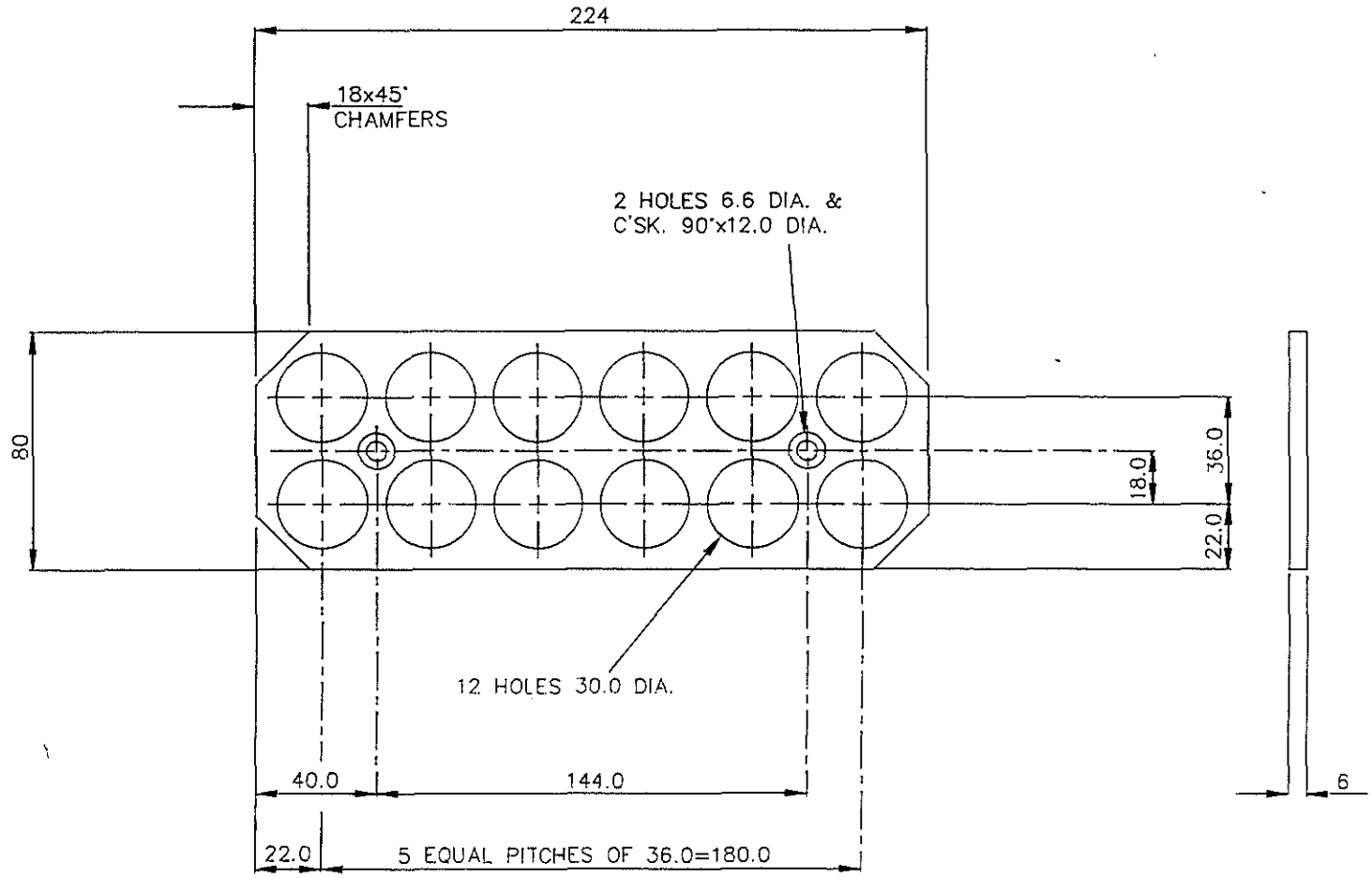
SIZE C

DRAWING No.	DETAIL
I.O.S./C5597	71

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:
CHECKED	RIGID PVC		± 0.5
TRACED	No.OFF PER UNIT 1	TOTAL No.OFF	
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE
SIZE C			

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			CERTIFIED	1	7-6-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

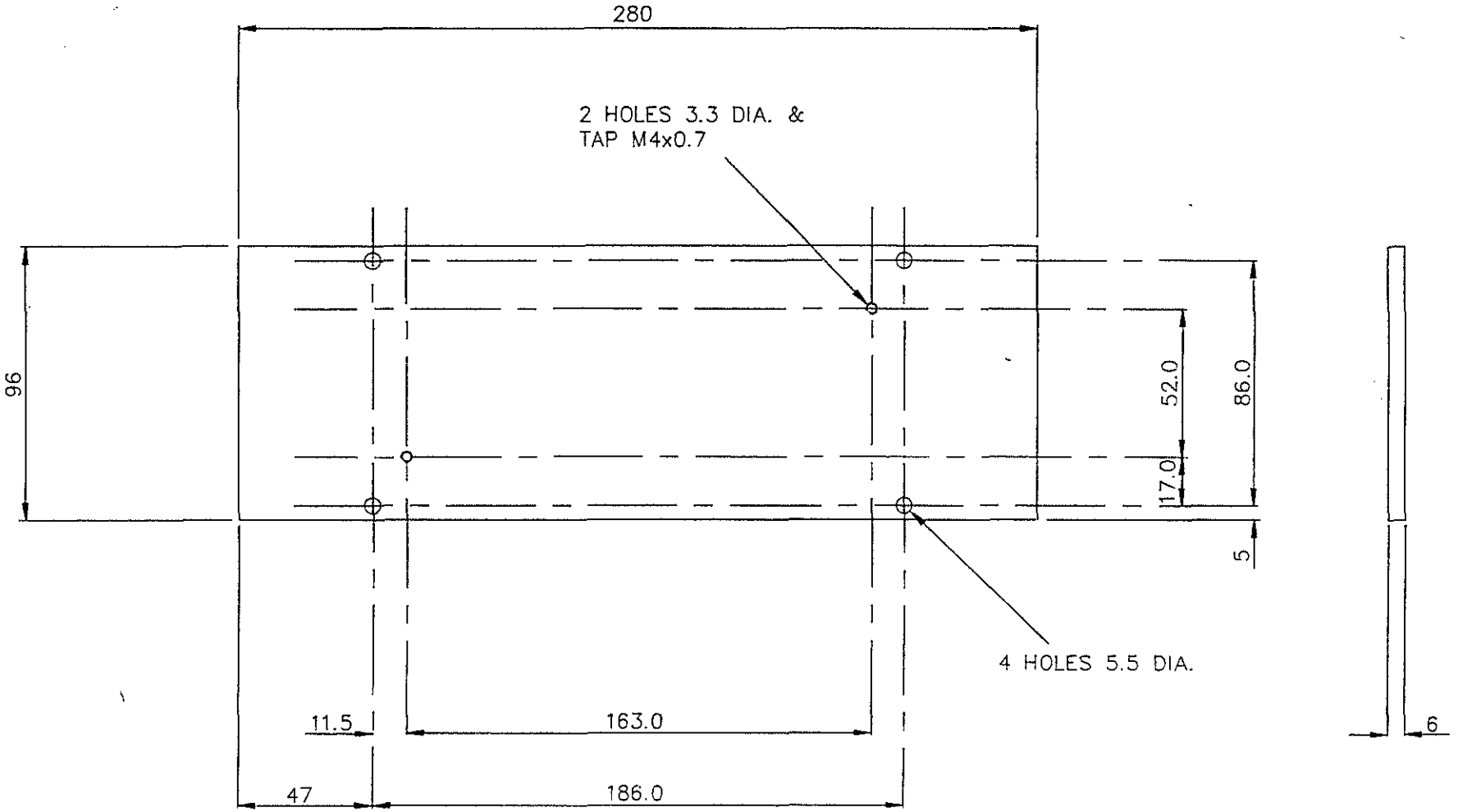
TITLE	DRAWING No.	DETAIL
BATTERY PLATE-B	I.O.S./C5597	71

DRAWING No.	DETAIL
I.O.S./C5597	72

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S									
CHECKED	MATERIAL RIGID PVC	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.5	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	7-6-91
	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE ARGOS MOUNTING PLATE			DRAWING No. I.O.S./C5597		DETAIL 72

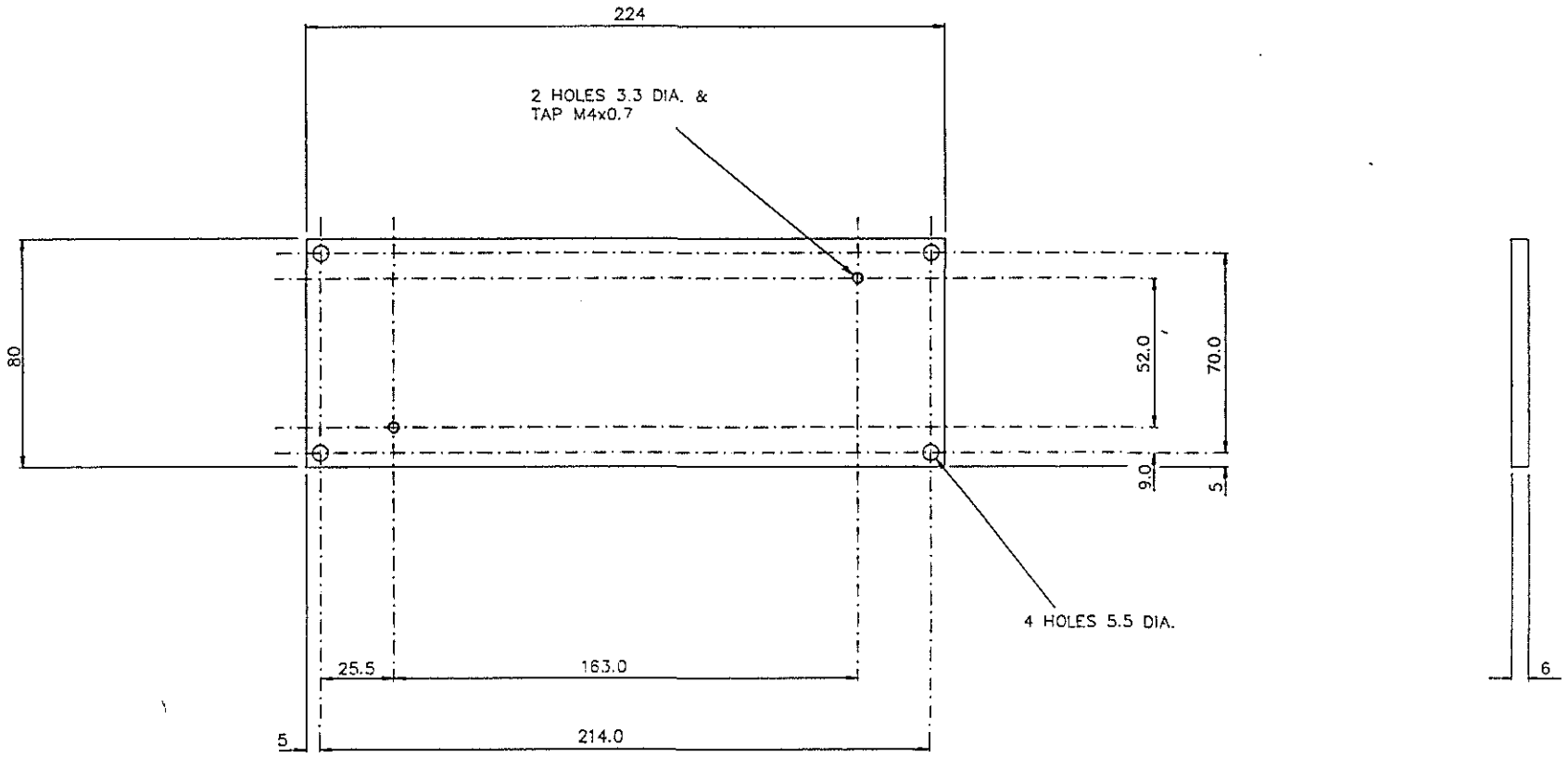
SIZE C

DRAWING No.	DETAIL
I.O.S./ C5597	73

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

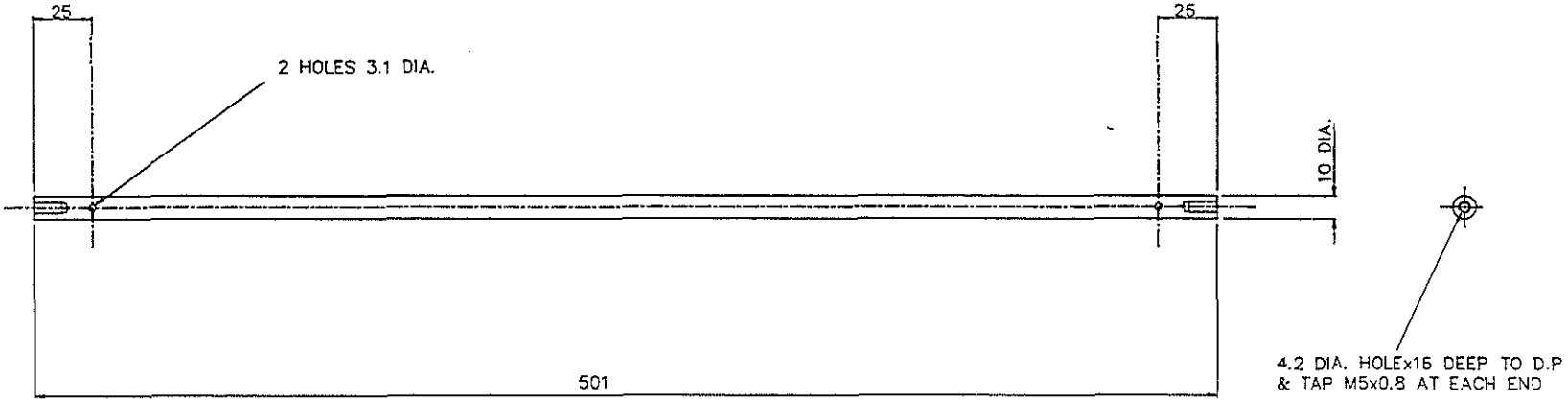
O/No. W/S	MATERIAL RIGID PVC	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ±0.5					
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 1	TOTAL No.OFF					CERTIFIED	1	10-6-91
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE C				TITLE CHARGER MOUNTING PLATE			DRAWING No. I.O.S./C5597		DETAIL 73

DRAWING No.	DETAIL
I.O.S./ C5597	74

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.3
CHECKED			
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF	
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			CERTIFIED	1	12-6-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

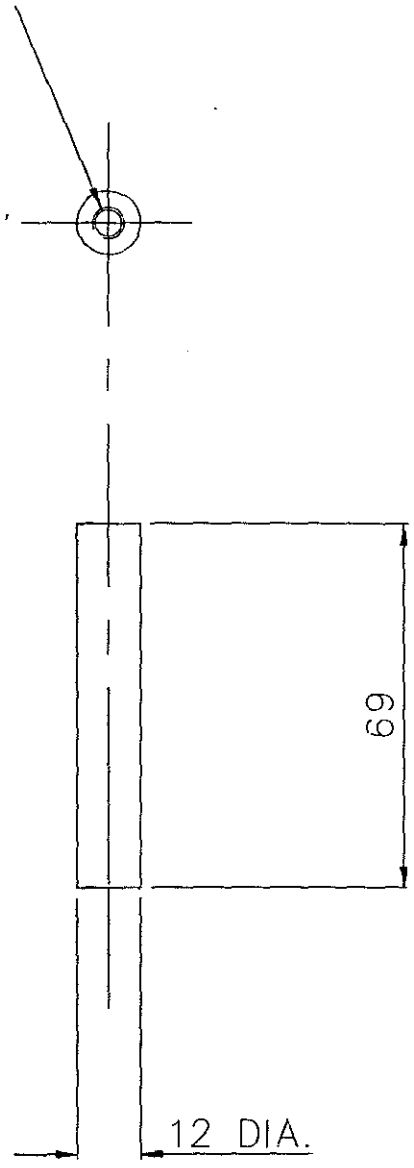
TITLE	DRAWING No.	DETAIL
MAIN FRAME PILLAR	I.O.S./ C5597	74

SIZE D

DRAWING No I.O.S./C5597 DETAIL 75 | THIRD ANGLE PROJECTION | FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc., SEE B.S.308

USED ON

5.0 DIA. HOLEx20 DEEP TO D.P.
& TAP M6x1 AT EACH END



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S											
CHECKED	MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED ± 0.3								
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF		AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE		
DRAWN							CERTIFIED	1	13-6-75		
	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES							
SIZE B				TITLE BATTERY PILLAR--A				DRAWING No I.O.S./C5597		DETAIL 75	

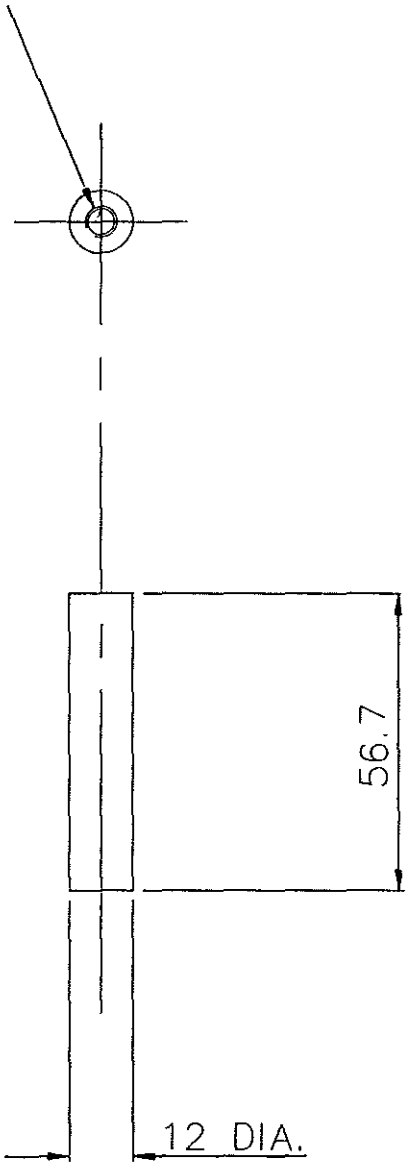
DRAWING No DETAIL
I.O.S./ C5597 76

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc., SEE B.S.308.

USED ON

5.0 DIA. HOLEx20 DEEP TO D.P.
& TAP M6x1 AT EACH END



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

Q/No. W/S	MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED ± 0.3							
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	21-4-81
DRAWN	No.OFF PER UNIT 2	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
ATTACHMENTS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE BATTERY PILLAR-B				DRAWING No I.O.S./ C5597		DETAIL 76

SIZE B

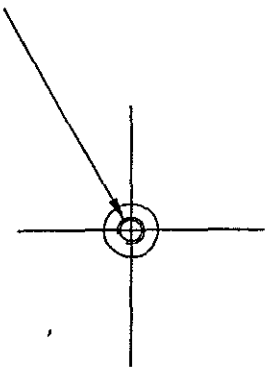
DRAWING No. I.O.S./C5597 DETAIL 77

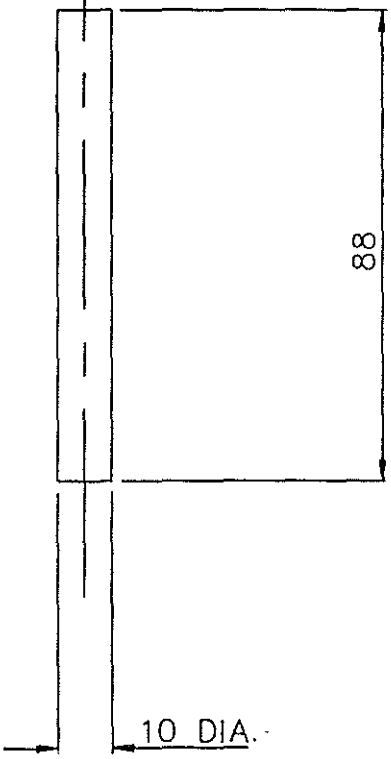
THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308

USED ON

4.2 DIA. HOLE x16 DEEP TO D.P.
& TAP M5x0.8 AT BOTH ENDS

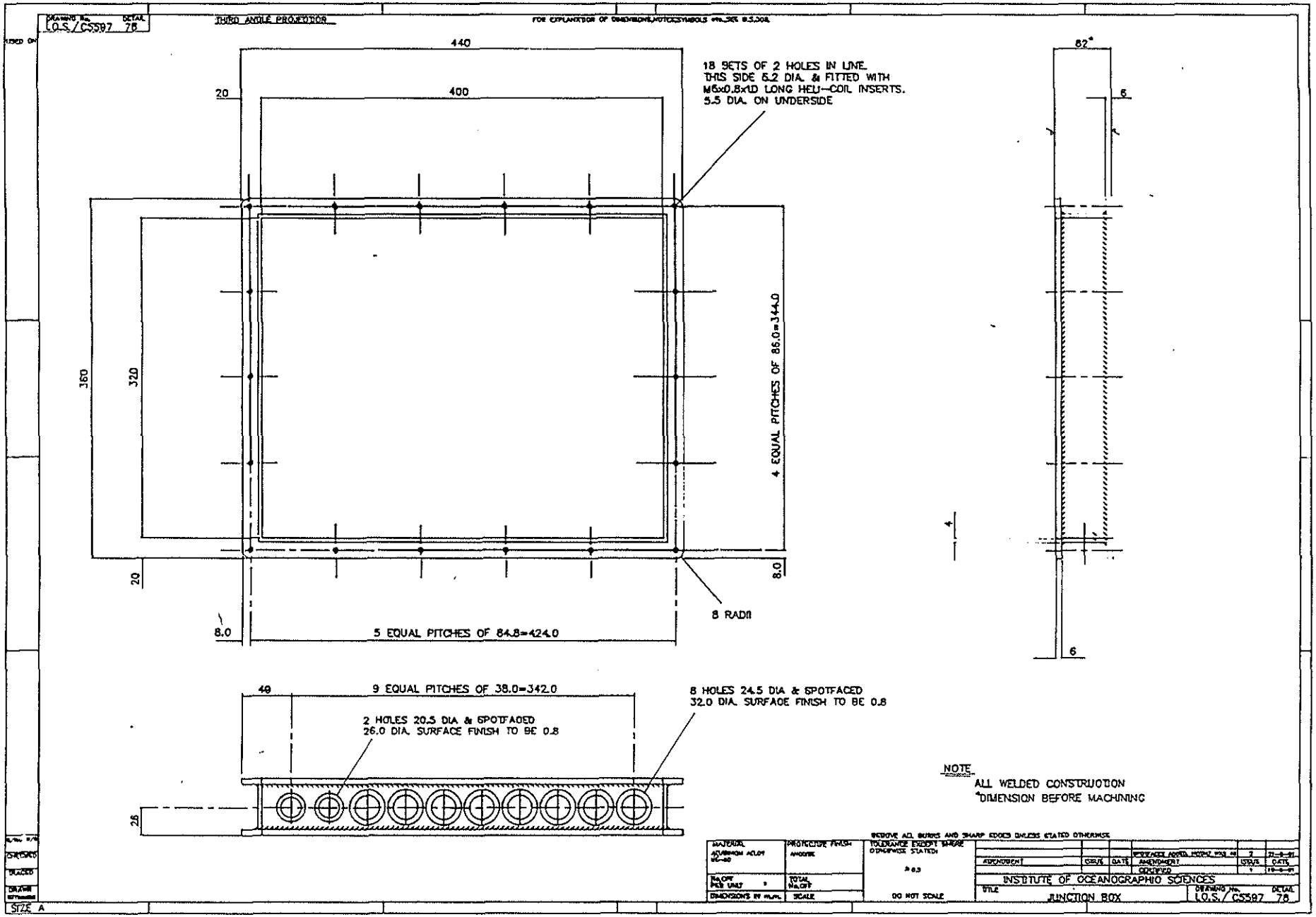




REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ALUMINIUM ALLOY	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED ±0.3						
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT CERTIFIED	ISSUE	DATE
TRACED	No. OFF PER UNIT 8	TOTAL No. OFT		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE MOUNTING PLATE PILLAR			DRAWING No. I.O.S./C5597		DETAIL 77

SIZE B

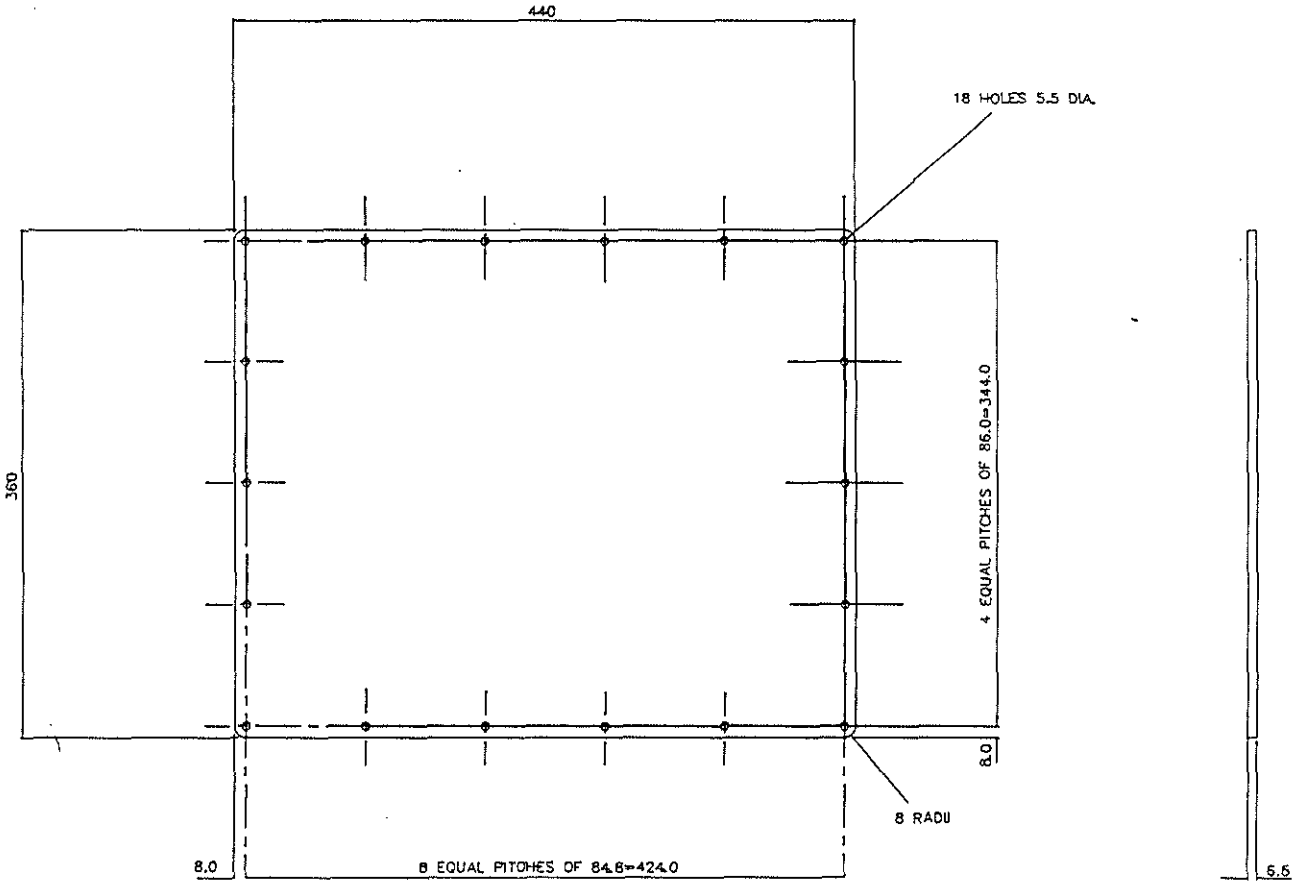

DRAWING No. O.S./C5597 DETAIL 78
THIRD ANGLE PROJECTION
440
20
400
18 SETS OF 2 HOLES IN LINE.
THIS SIDE 5.2 DIA. & FITTED WITH
M6x0.8x1D LONG HELI-COIL INSERTS.
5.5 DIA. ON UNDERSIDE
360
320
4 EQUAL PITCHES OF 86.0=344.0
20
8.0
8 RADII
8.0
5 EQUAL PITCHES OF 84.8=424.0
82*
5
4
6
40
9 EQUAL PITCHES OF 38.0=342.0
2 HOLES 20.5 DIA & SPOTFACED
26.0 DIA. SURFACE FINISH TO BE 0.8
8 HOLES 24.5 DIA & SPOTFACED
32.0 DIA. SURFACE FINISH TO BE 0.8
25
NOTE
ALL WELDED CONSTRUCTION
*DIMENSION BEFORE MACHINING
REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE
MATERIAL
ALUMINIUM ALLOY BS-1490
PROTECTIVE FINISH
ANODISE
WEIGHT PER UNIT
TOTAL WEIGHT
DIMENSIONS IN mm.
SCALE
TOLERANCE EXCEPT WHERE OTHERWISE STATED
± 0.5
DO NOT SCALE
AMENDMENT
ISSUE
DATE
AMENDMENT
ISSUE
DATE
ORIGINATED
2
22-8-91
1
10-8-91
INSTITUTE OF OCEANOGRAPHIC SCIENCES
TITLE
JUNCTION BOX
DRAWING No.
O.S./C5597
DETAIL
78
SIZE A

DRAWING No.	DETAIL
I.O.S./ C5597	79

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

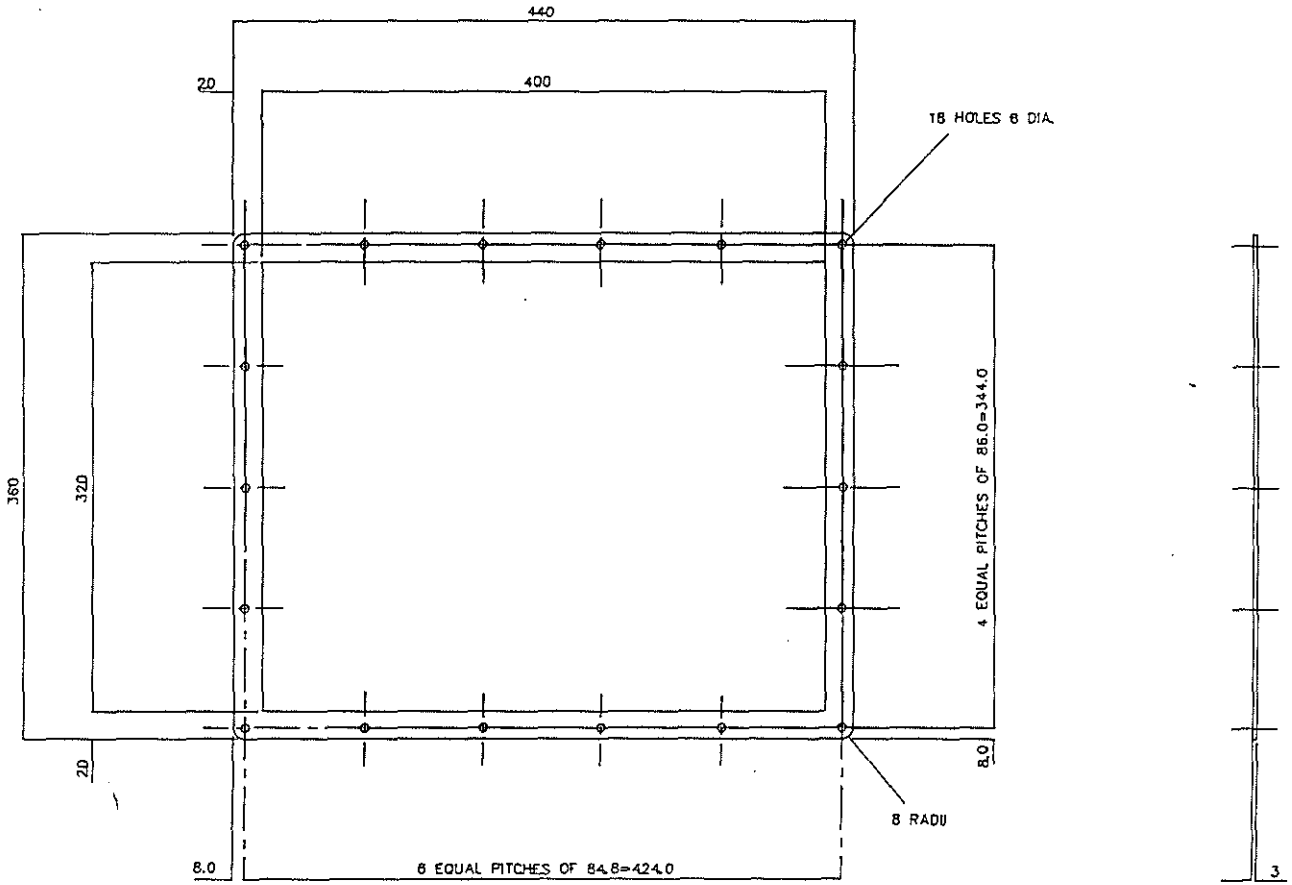
O/No. W/S									
CHECKED	MATERIAL ALUMINIUM ALLOY HE-30	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.5	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	19-6-91
	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE JUNCTION BOX LID			DRAWING No. I.O.S./ C5597		DETAIL 79
SIZE C									

DRAWING No.	DETAIL
I.O.S./C5597	80

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

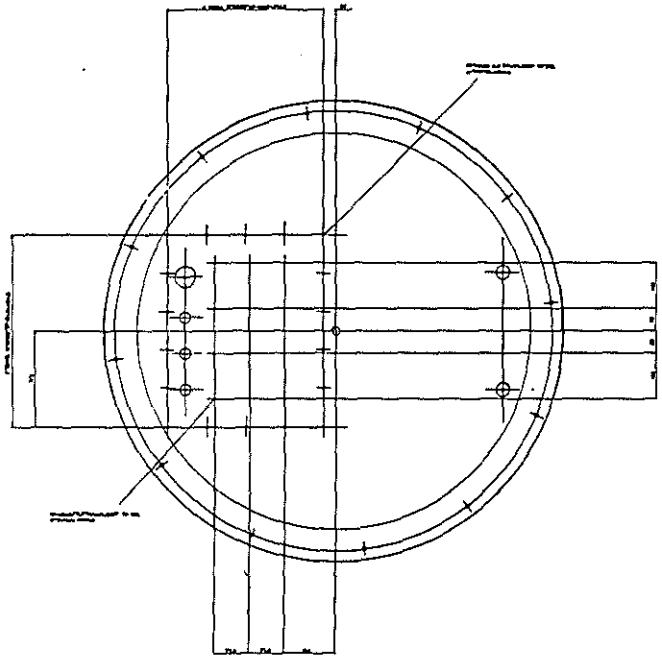
O/No. W/S	MATERIAL NEOPRENE 40–50 BHS	PROTECTIVE FINISH -	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1						
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF					CERTIFIED	1	19-6-91
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE C				TITLE JUNCTION BOX GASKET			DRAWING No. I.O.S./C5597		DETAIL 80

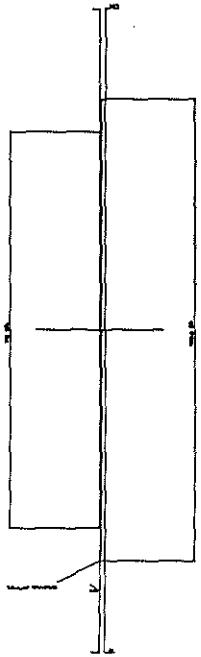
DRAWING No. I.O.S./C5597 DETAIL 81

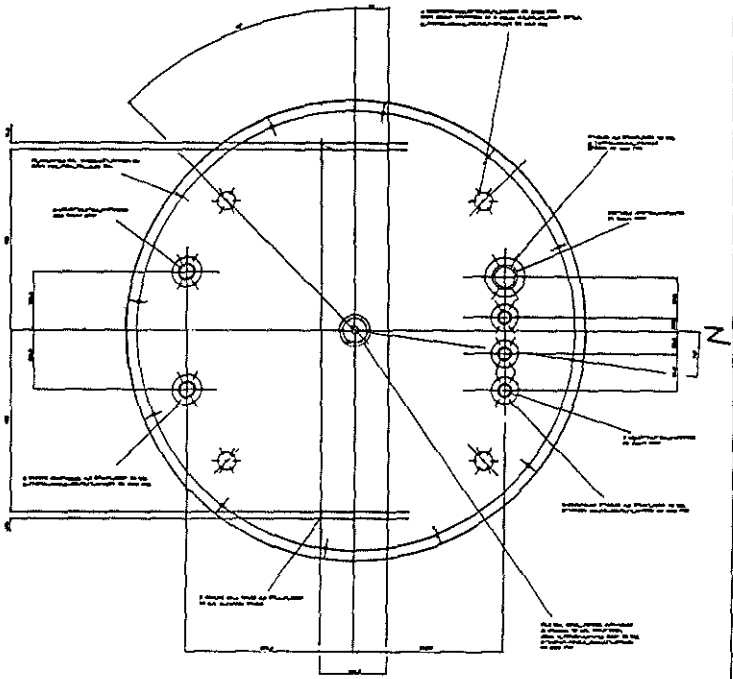
THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES & SYMBOLS etc. SEE B.S.308.

USED ON







				70 DIA O'BORE & M3 HOLES ADDED	B	6-7-81
AMENDMENT	ISSUE	DATE	AMENDMENT		ISSUE	DATE
			CLOSFIED		1	5-2-81

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE MAIN INSTRUMENT HOUSING LID | DRAWING No. I.O.S./C5597 | DETAIL 81

MATERIAL ALUMINIUM ALLOY BS-30	PROTECTIVE FINISH ANODISE	TOLERANCES EXCEPT WHERE OTHERWISE STATED ± 0·5	REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE
No. OFF PER UNIT 1	TOTAL No. OFF		
DIMENSIONS IN mm	SCALE	DO NOT SCALE	

U/No. 7/6	
CHECKED	
TRACED	
DRAWN	

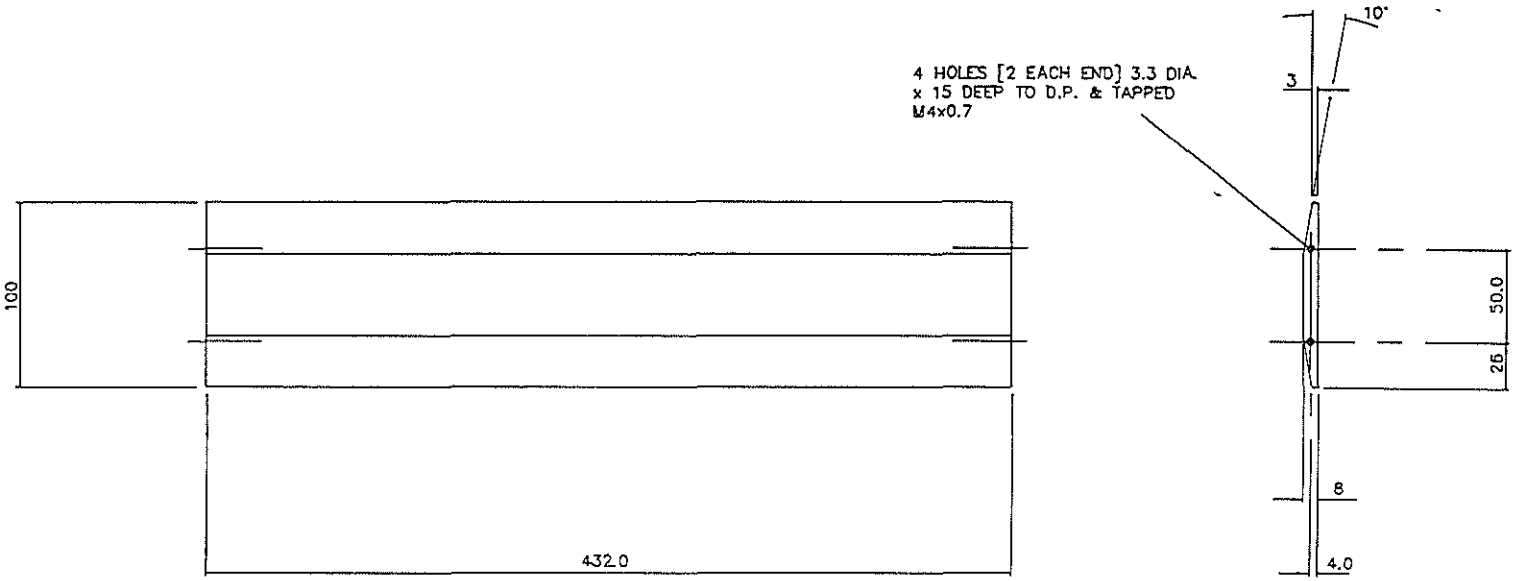
SIZE A

DRAWING No.	DETAIL
I.O.S./C5597	82

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:						
CHECKED	ALUMINIUM ALLOY		± 0.5	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	4-7-81
	No.OFF PER UNIT 4	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 1:2	DO NOT SCALE	TITLE PCB CHASSIS BAR			DRAWING No. I.O.S./C5597		DETAIL 82

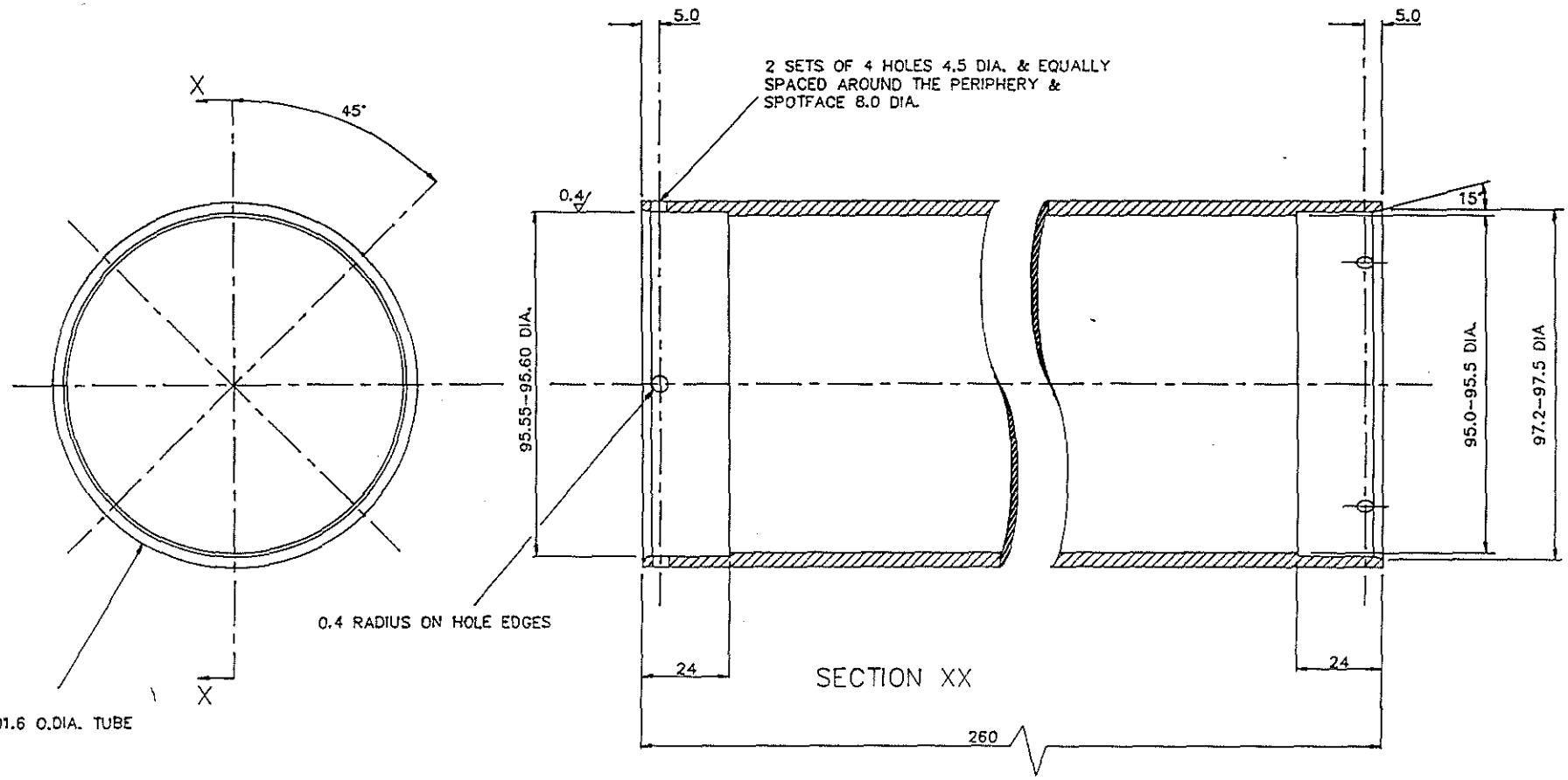
SIZE C

DRAWING No.	DETAIL
I.O.S./C5597	83

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

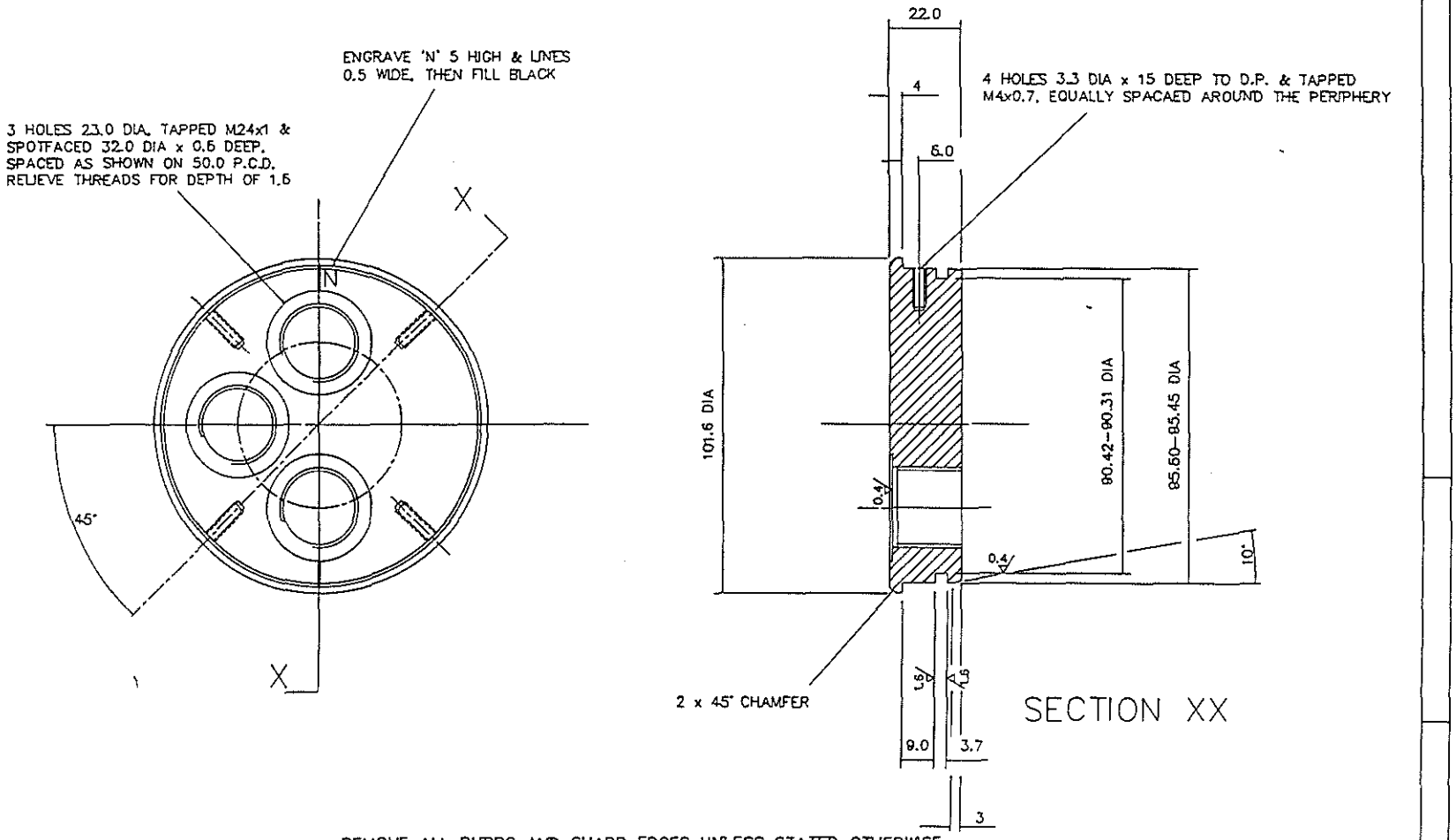
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:				15° CHAMFERS ADDED TO TUBE C'BORES	3	9-6-91
CHECKED	ALUMINIUM ALLOY HE-30	ANODISE	± 0.5				4 HOLES ROTATED 45°	2	17-7-91
TRACED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 1	TOTAL No.OFF					CERTIFIED	1	5-7-91
DRAWN NTIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE C				TITLE COMPASS HOUSING BODY			DRAWING No. I.O.S./C5597		DETAIL 83

DRAWING No. I.O.S./ C5597 DETAIL 84

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:				THREADS RELIEVED FOR DEPTH OF 1.5	3	20-6-91
CHECKED	ALUMINIUM ALLOY HE-30	ANODISE	± 0.6				GROOVE WAS 90.85–90.60 DIA	2	9-8-91
TRACED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 1	TOTAL No.OFF					CERTIFIED	1	15-7-91
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
				TITLE COMPASS HOUSING CAP			DRAWING No. I.O.S./ C5597		DETAIL 84

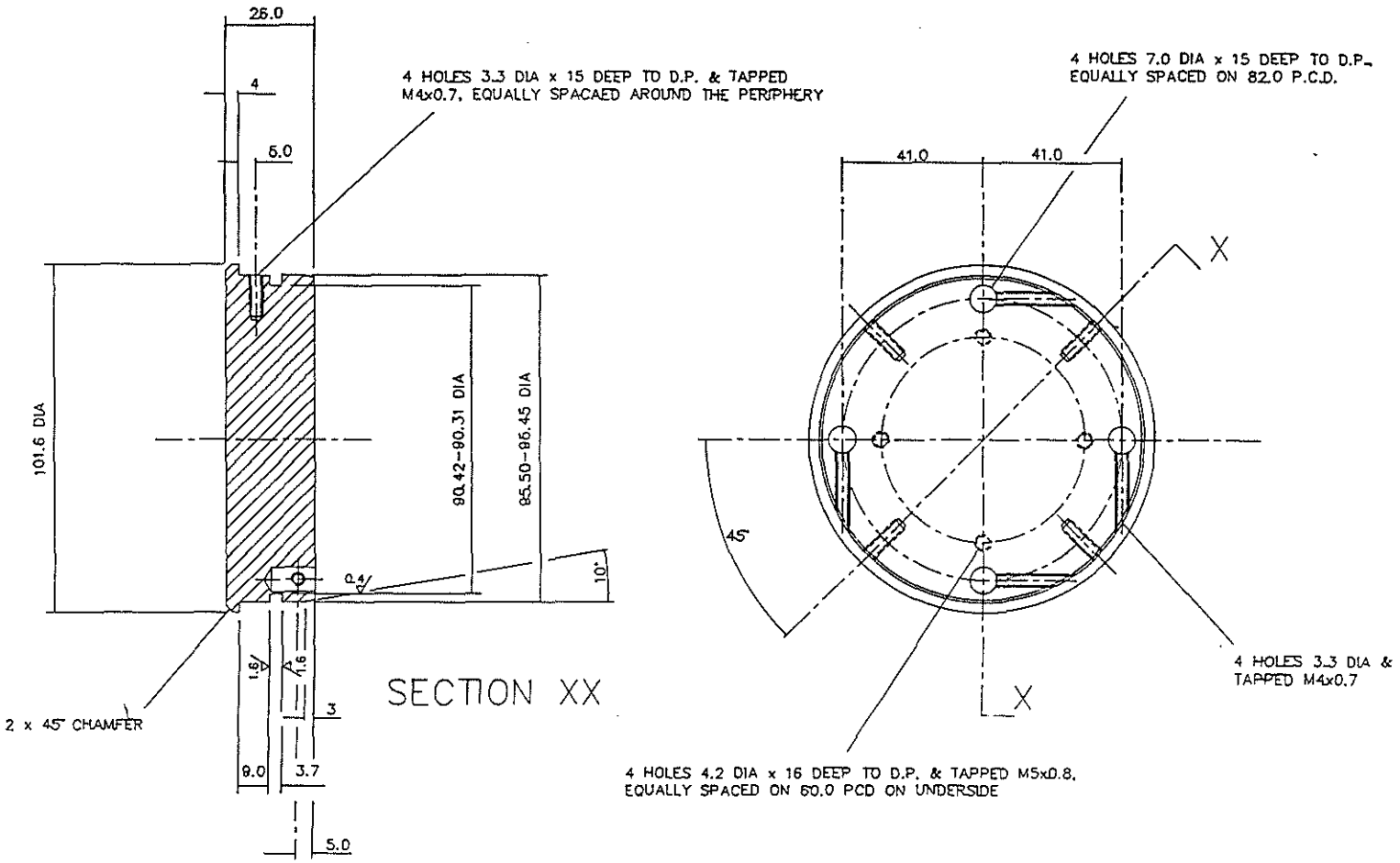
SIZE C

DRAWING No.	DETAIL
I.O.S./ C5597	85

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:
CHECKED	ALUMINIUM ALLOY	ANODISE	
TRACED	No.OFF PER UNIT 1	TOTAL No.OFF	± 0.5
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE

AMENDMENT	ISSUE	DATE

AMENDMENT	ISSUE	DATE
GROOVE WAS 90.85-90.60 DIA	2	9-8-91
CERTIFIED	1	17-7-91

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE	DRAWING No.	DETAIL
COMPASS HOUSING BASE	I.O.S./ C5597	85

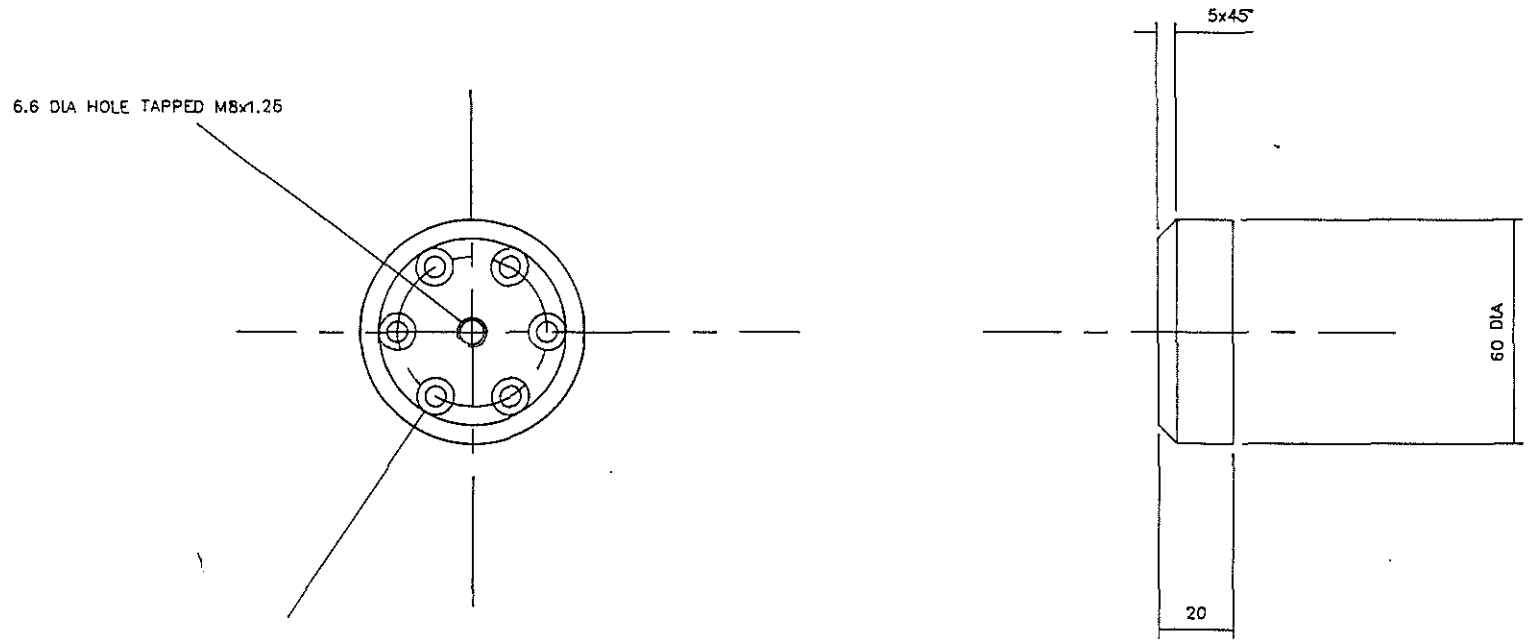
SIZE C

DRAWING No. I.O.S./C5597 DETAIL 86

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ALUMINIUM ALLOY HE-30	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.5
CHECKED			
TRACED	No.OFF PER UNIT 4	TOTAL No.OFF	
DRAWN NTTIMMINS	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE

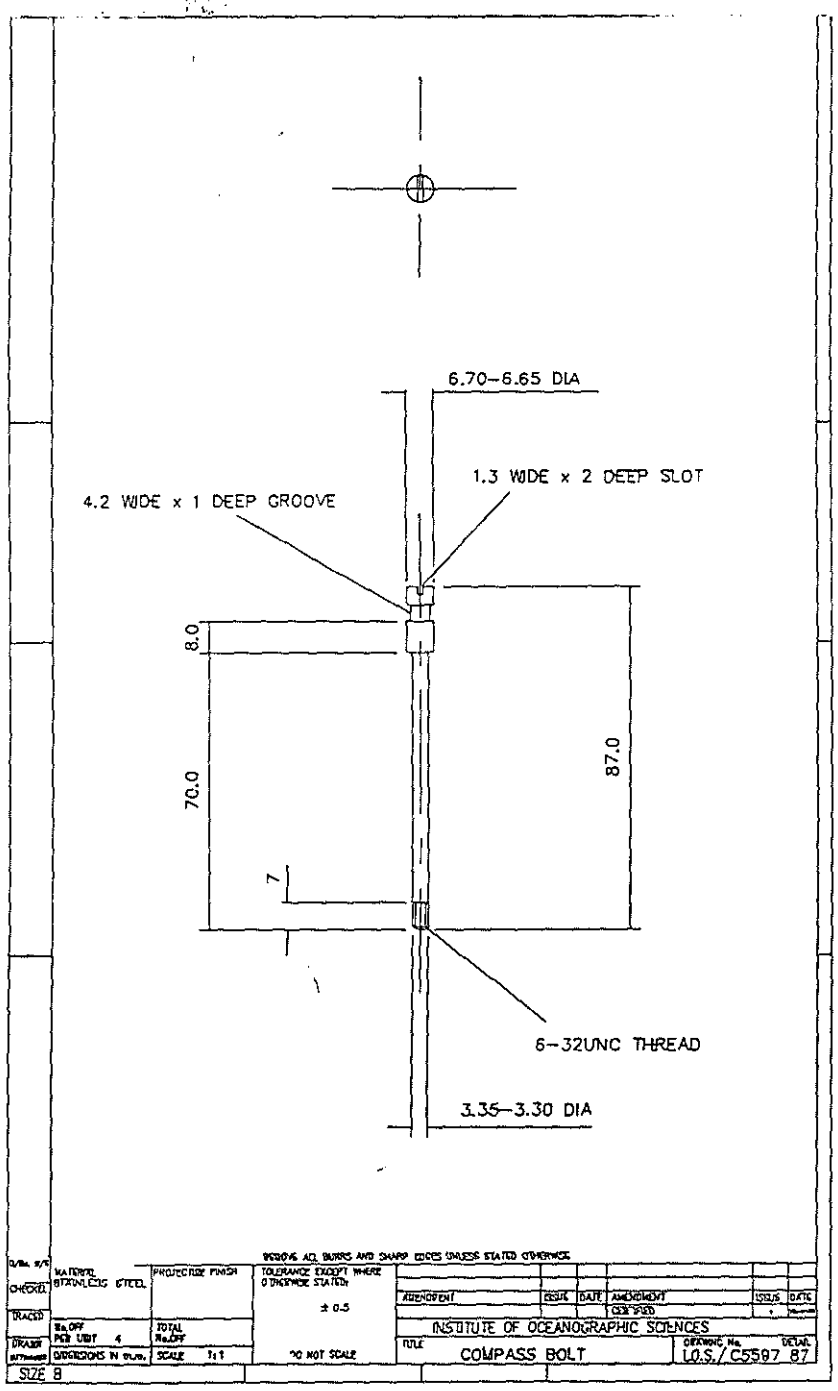
AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			CERTIFIED	1	3-7-91

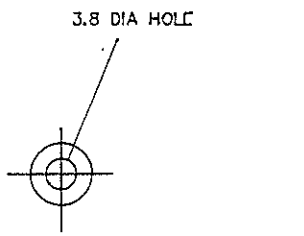
INSTITUTE OF OCEANOGRAPHIC SCIENCES

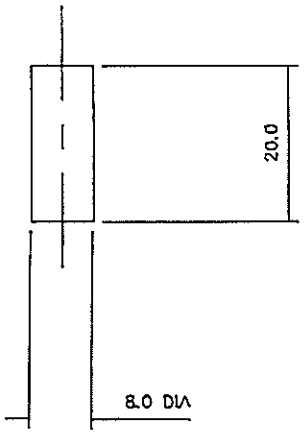
TITLE LIFTING EYE BOSS

DRAWING No. I.O.S./C5597 DETAIL 86

SIZE C


6.70–6.65 DIA
1.3 WIDE x 2 DEEP SLOT
4.2 WIDE x 1 DEEP GROOVE
8.0
70.0
87.0
7
6–32UNC THREAD
3.35–3.30 DIA
REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE
MATERIAL STAINLESS STEEL
PROJECTION FINISH
TOLERANCE EXCEPT WHERE OTHERWISE STATED
± 0.5
DRAWN
DIMENSIONS IN mm
SCALE 1:1
DO NOT SCALE
INSTITUTE OF OCEANOGRAPHIC SCIENCES
TITLE COMPASS BOLT
DRAWING No. O.S./C5597
DETAIL 87
SIZE B





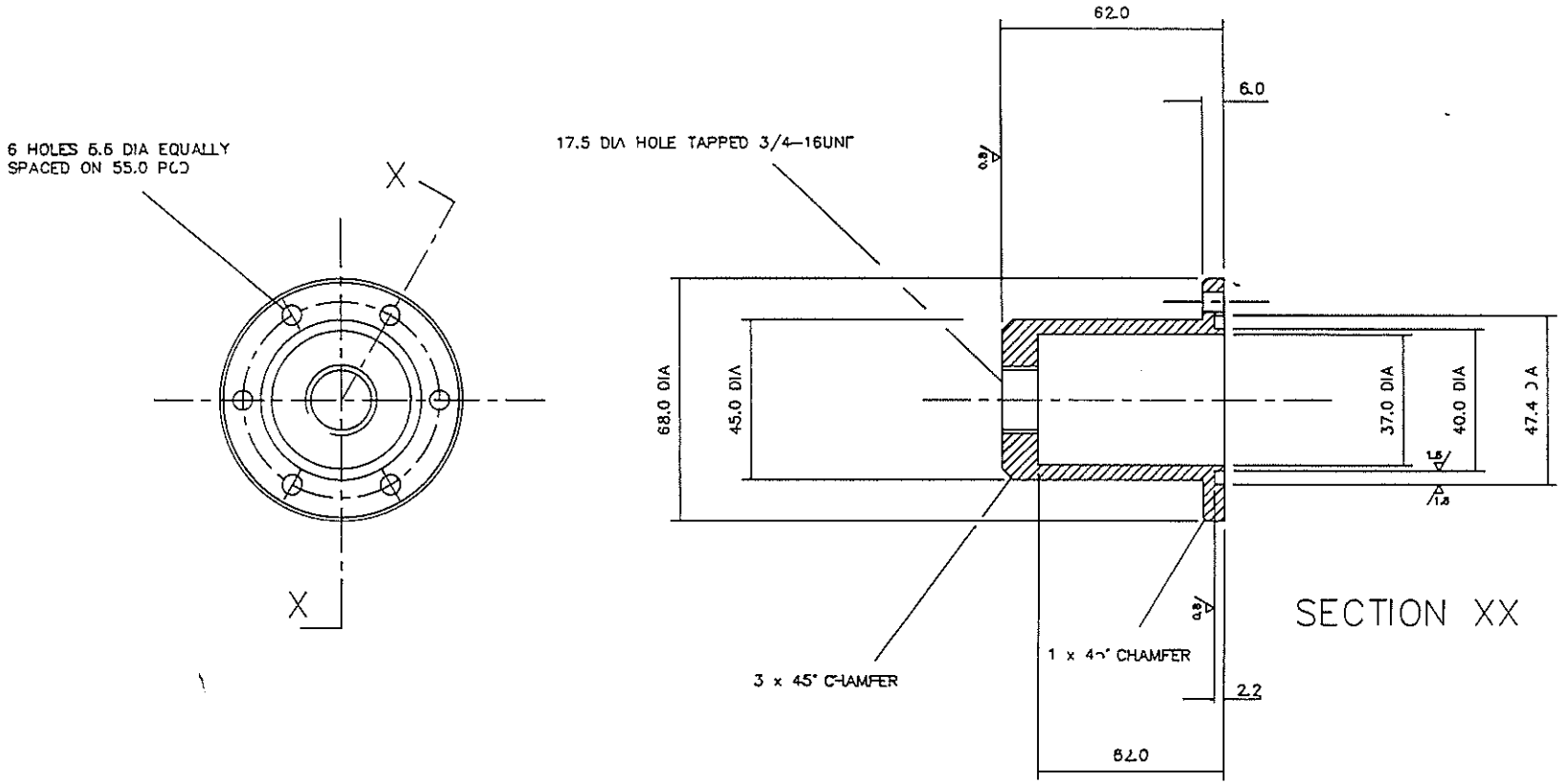
M.W. P/T			REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE						
CHECKED	MATERIAL NICRO P.V.	PROJECTION FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED ± 0.2						
DRAWN	No OFF PER UNIT 12	TOTAL No OFF		ADDENDUM	ISSUE	DATE	AMENDMENT	ISSUE	DATE
							CERTIFIED	1	
TRACED	DIMENSIONS IN m/m	SCALE 2	DO NOT SCALE	INSTITU E OF OCEANOGRAPHIC SCIENCES					
				TITLE COMPASS SPACER				DRAWING No. D.O.S./C5597	DETAIL 68
SIZE B									

DRAWING No.	DETAIL
I.O.S./C5597	89

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O No. W/S	MATERIAL ALUMINIUM ALLOY HE-30	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.5					
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	22-7-91
DRAWN NTTIMMINS	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE PRESSURE RELIEF HOUSING			DRAWING No. I.O.S./C5597		DETAIL 89

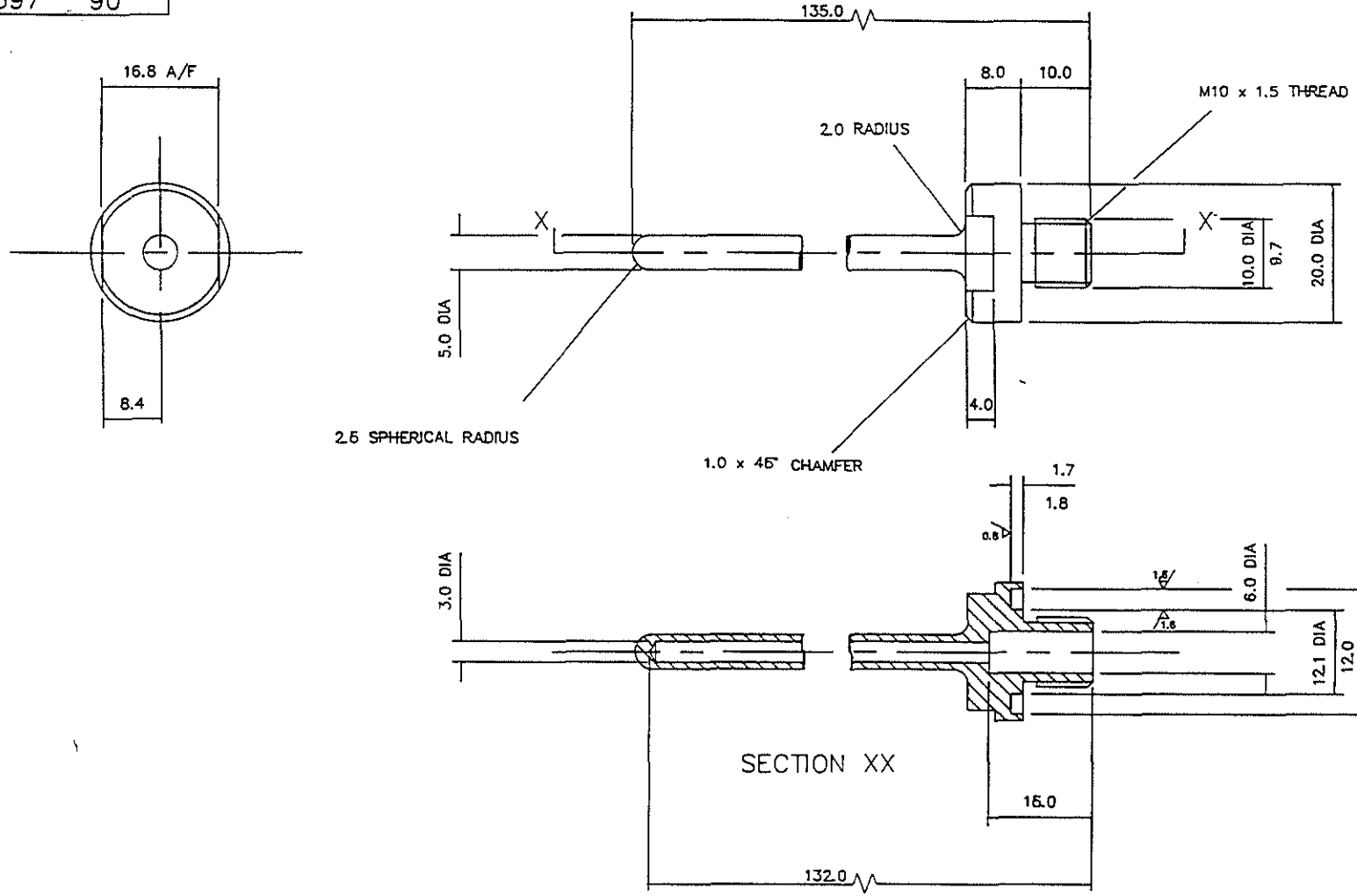
SIZE C

DRAWING No. I.O.S./5597 DETAIL 90

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL STAINLESS STEEL 316 S16	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1				RE-DRAWN ON COMPUTER	2	18-12-92
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	19-6-91
DRAWN N.JUMMINS	No.OFF PER UNIT 2	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 2:1	DO NOT SCALE	TITLE BODY, AIR TEMPERATURE SENSOR			DRAWING No. I.O.S./ 5597		DETAIL 90

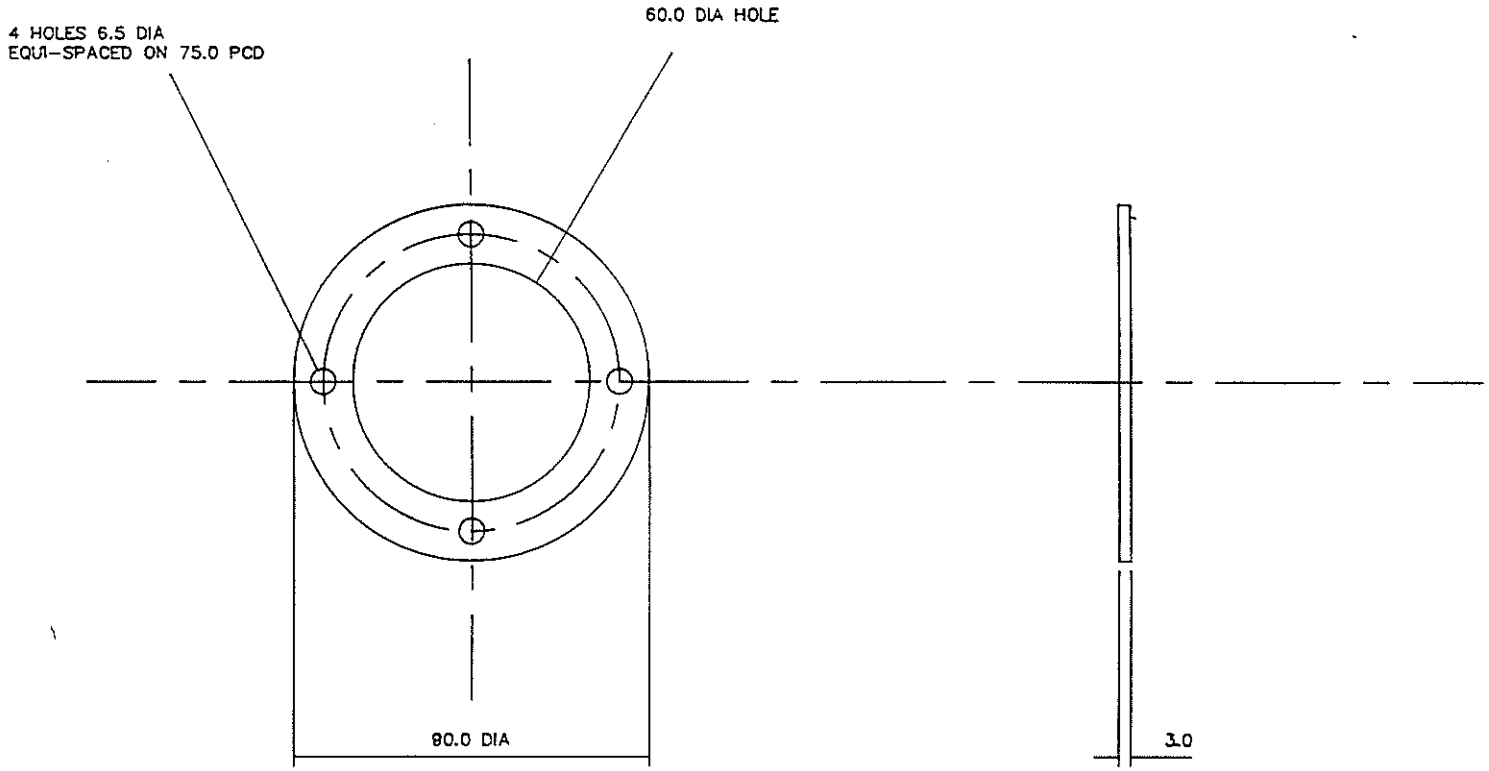
SIZE C

DRAWING No. I.O.S./ 5597 DETAIL 91

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL SYNTHETIC RUBBER 40/50 IRHD	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1.0				RE-DRAWN ON COMPUTER	2	18-12-92
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	8-8-91
DRAWN N.JIMMINS	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE GASKET			DRAWING No. I.O.S./ 5597		DETAIL 91

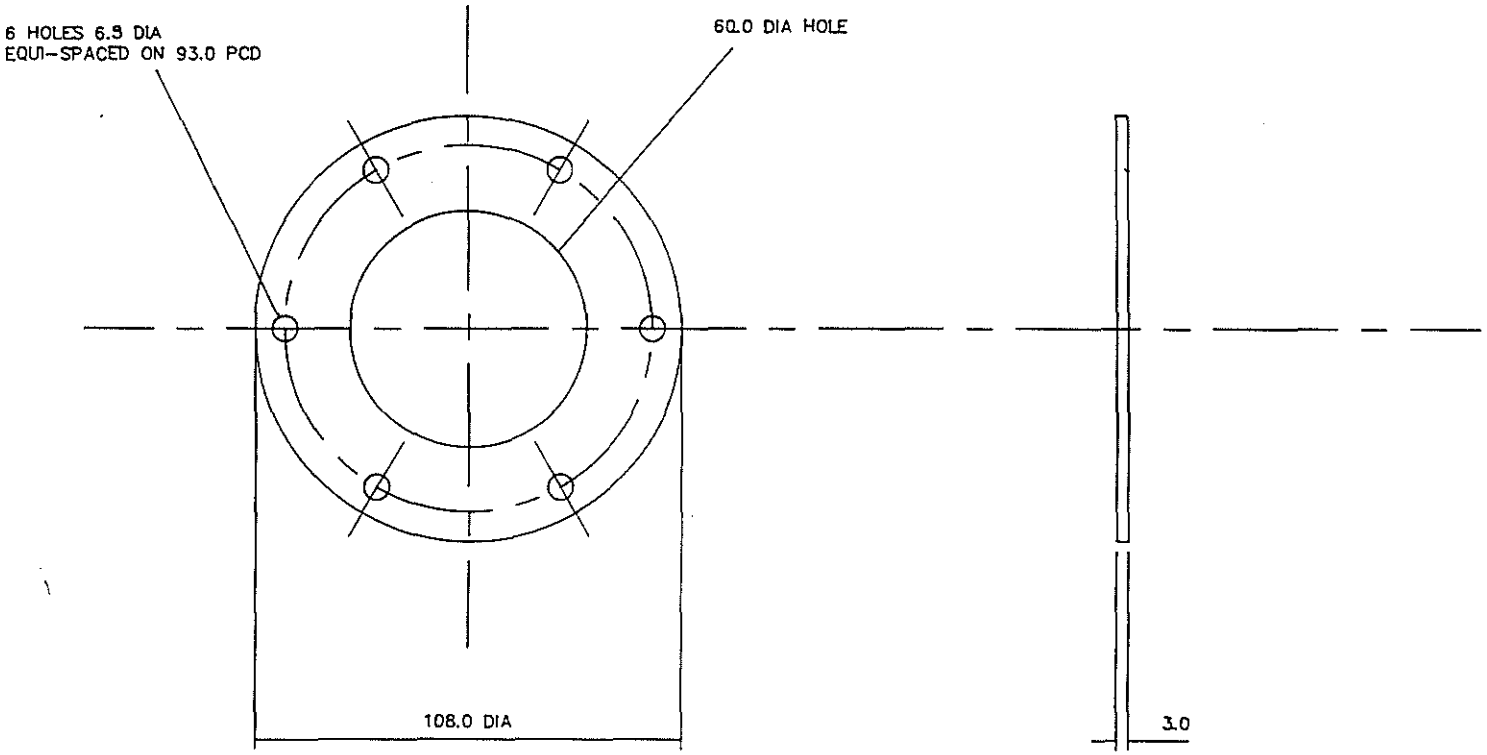
SIZE C

DRAWING No.	DETAIL
I.O.S./ 5597	92

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL SYNTHETIC RUBBER 40/50 IRHD	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:				RE-DRAWN ON COMPUTER	2	18-12-92
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED			± 1.0				CERTIFIED	1	8-8-91
DRAWN N.JIMMINS	No.OFF PER UNIT 2	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE GASKET			DRAWING No. I.O.S./ 5597		DETAIL 92

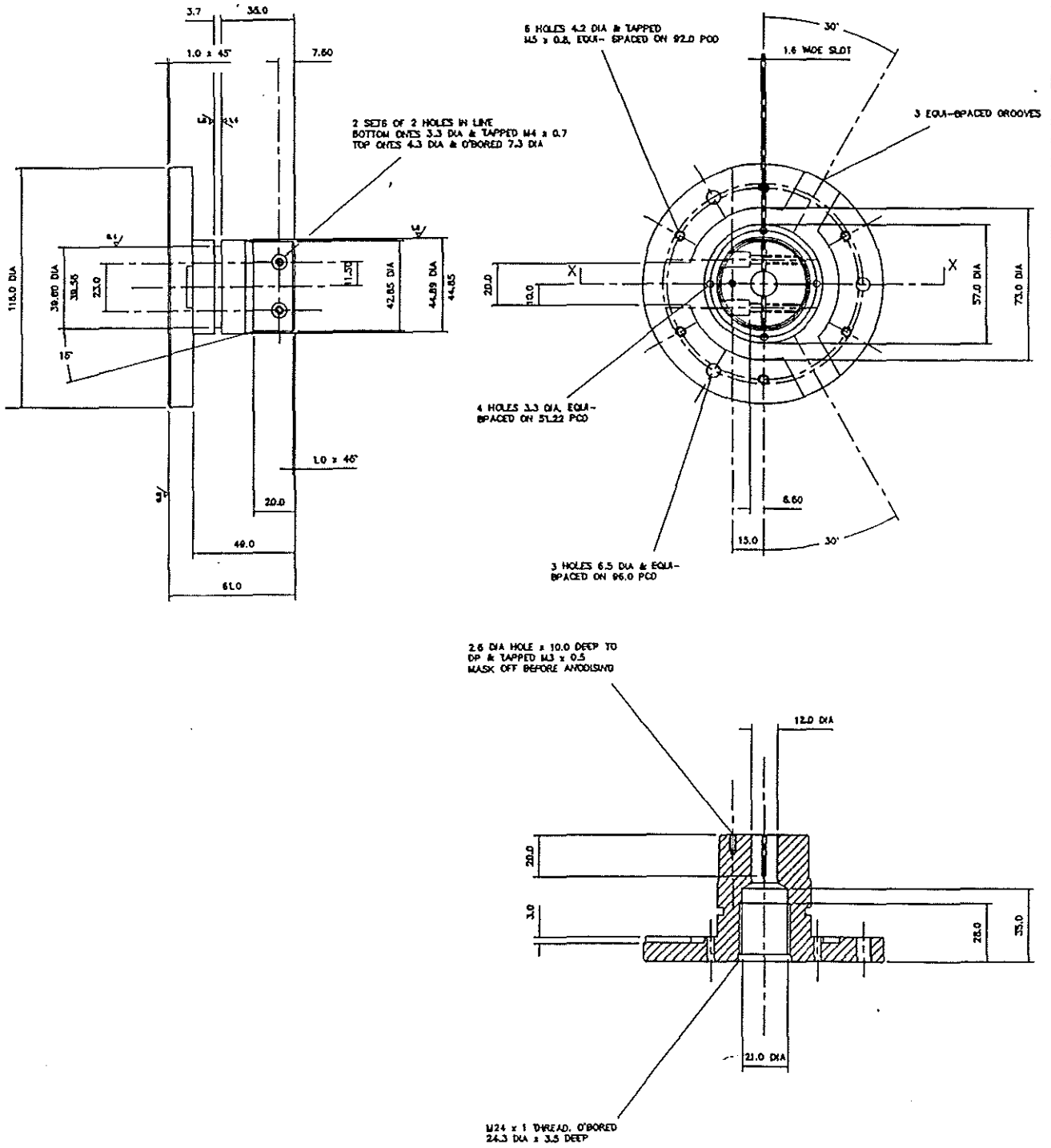
SIZE C

DRAWING No. I.O.S./5597 DETAIL 94

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

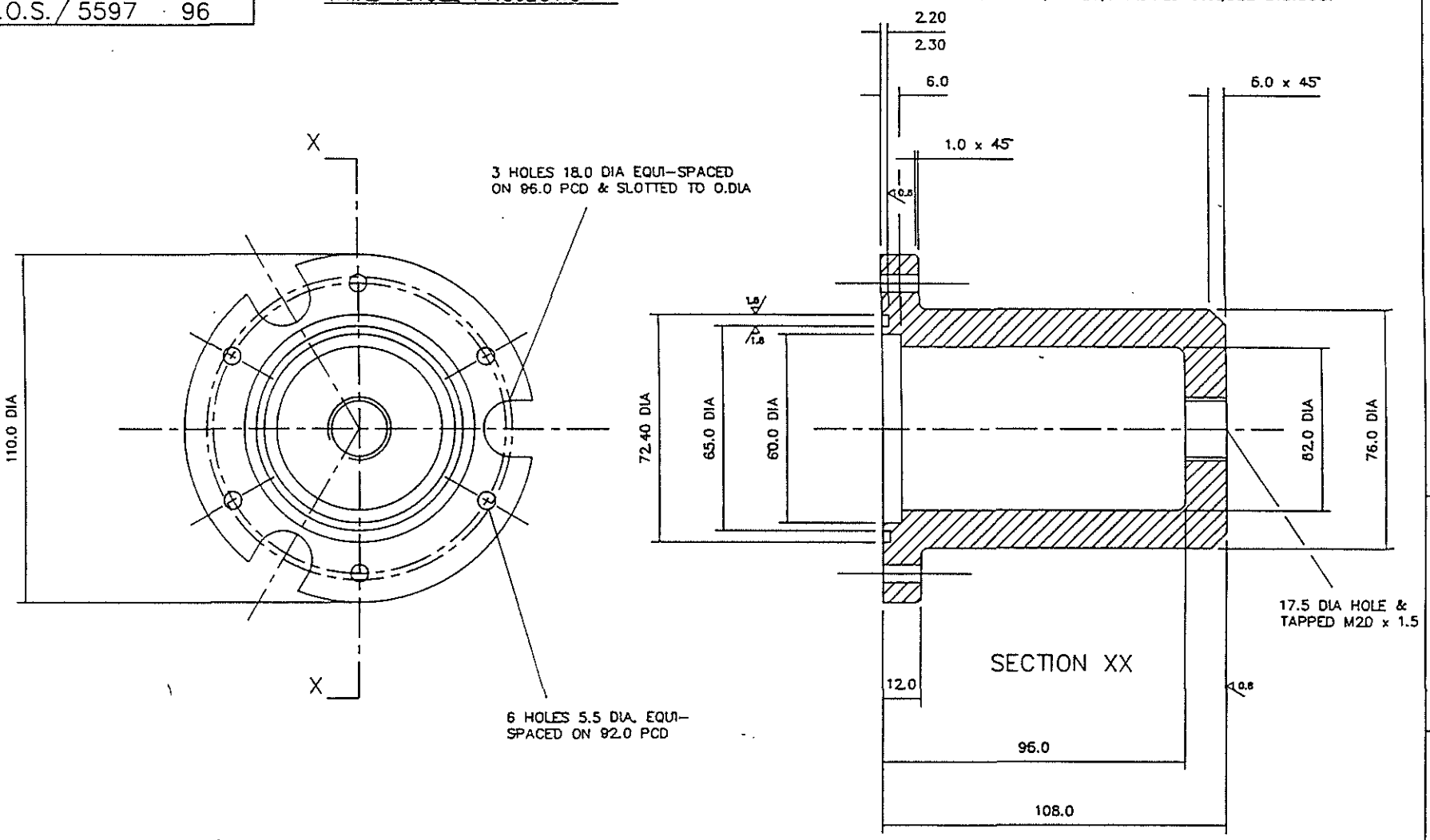
O/No. W/S	MATERIAL ALUMINIUM ALLOY HE 30 WP	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1				2	23-12-92
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	28-11-89
DRAWN	No. OFF PER UNIT 1	TOTAL No. OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE SST END CAP-TOP			DRAWING No. I.O.S./5597		DETAIL 94

DRAWING No.	DETAIL
I.O.S./ 5597	96

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

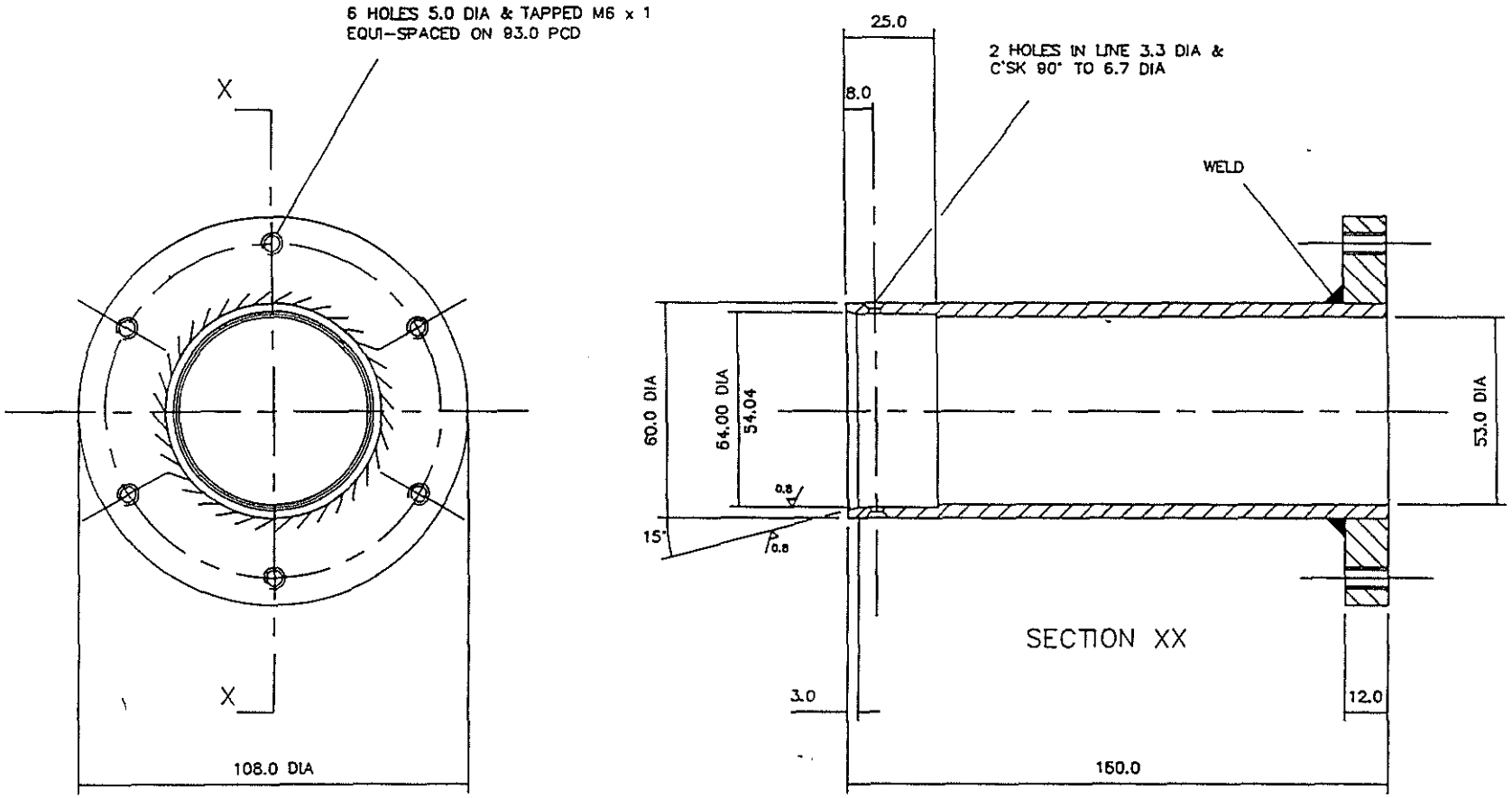
O/No. W/S	MATERIAL POLYPROPYLENE	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.1			RE-DRAWN ON COMPUTER	2	4-1-93
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	28-11-91
DRAWN N.Timms	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE TOP HAT-SST			DRAWING No. I.O.S./ 5597		DETAIL 96
SIZE C									

DRAWING No.	DETAIL
I.O.S./ 5597	97

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL ALUMINIUM ALLOY HE 30 WP	PROTECTIVE FINISH ANODISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 0.4
CHECKED			
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF	
DRAWN N.JUMMS	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			RE-DRAWN ON COMPUTER	2	6-1-93
			CERTIFIED WAS DETAIL 28	1	2-12-91

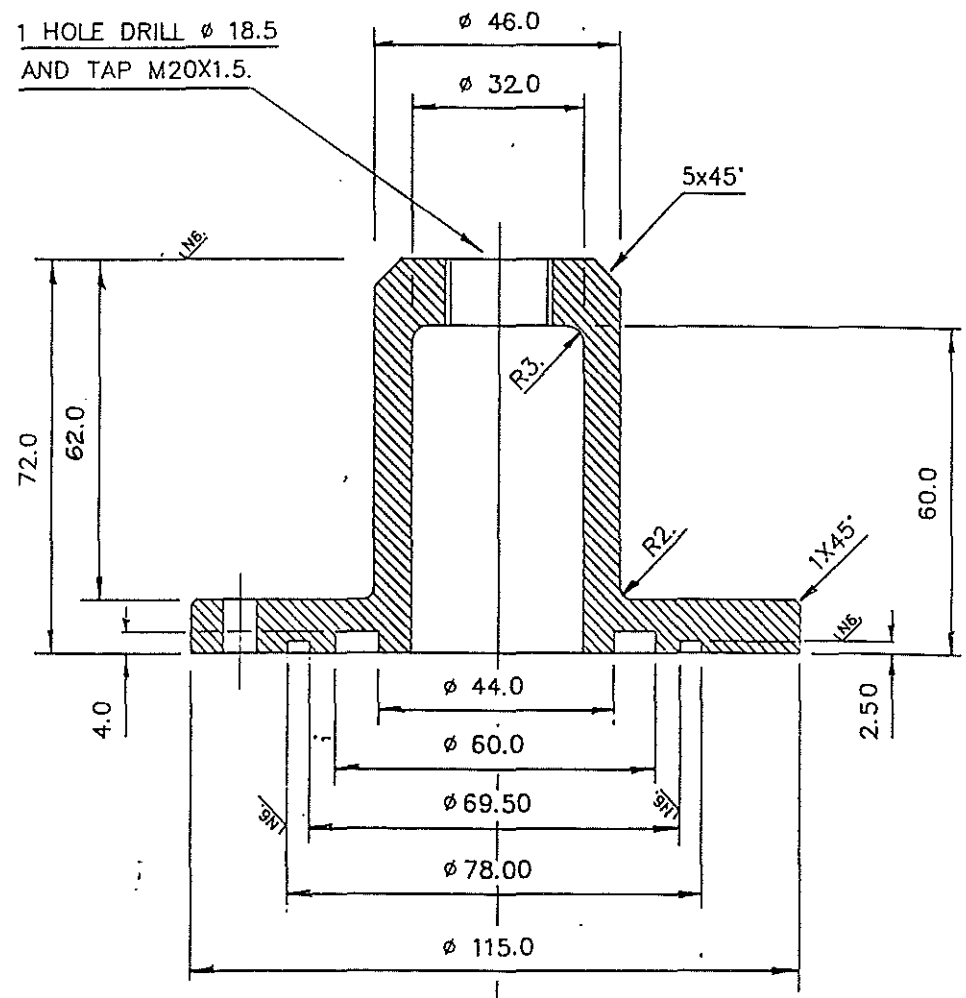
INSTITUTE OF OCEANOGRAPHIC SCIENCES

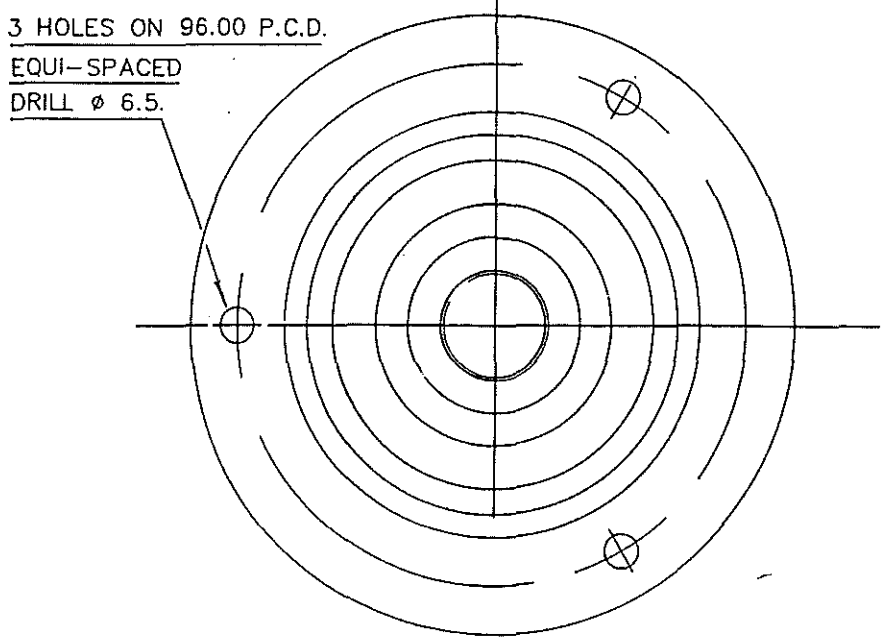
TITLE	DRAWING No.	DETAIL
DCP ANTENNA TUBE BASE	I.O.S./ 5597	97

SIZE C

DRAWING No. I.O.S./ C5597 DETAIL 100 | THIRD ANGLE PROJECTION | FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308

USED ON





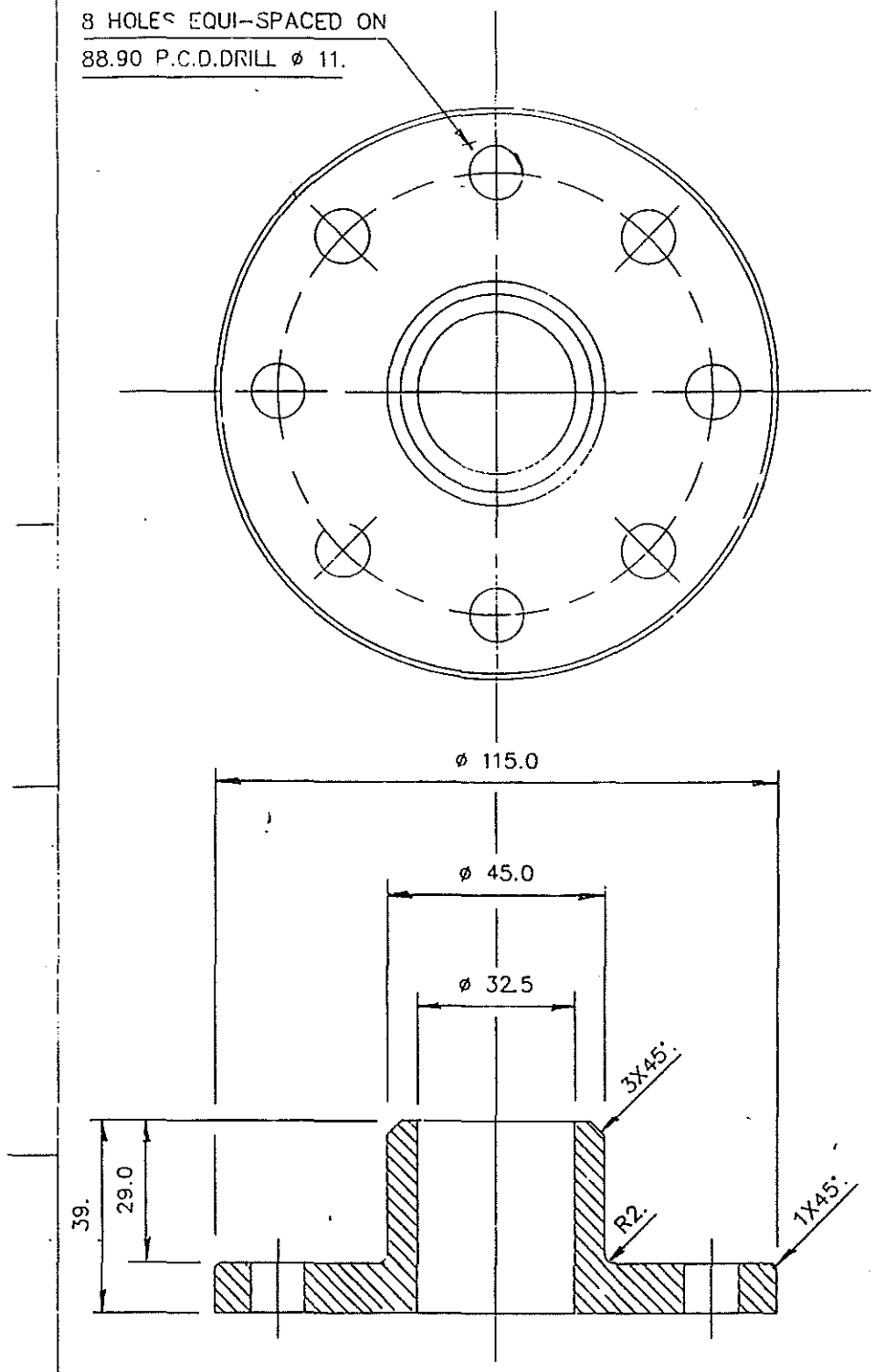
REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± m.m.							
CHECKED	POLYPROPYLENE		.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No. OFF PER UNIT 2	TOTAL No OFF	.XX = ± .1m.m.				CERTIFIED 1		m/c/yy
DRAWN B.H.	DIMENSIONS IN m/m.	SCALE 1:1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE TOP HAT FOR BUOY TUBE.			DRAWING No. I.O.S./C5597		DETAIL 100

DRAWING No. L.O.S./C5597 DETAIL 101

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

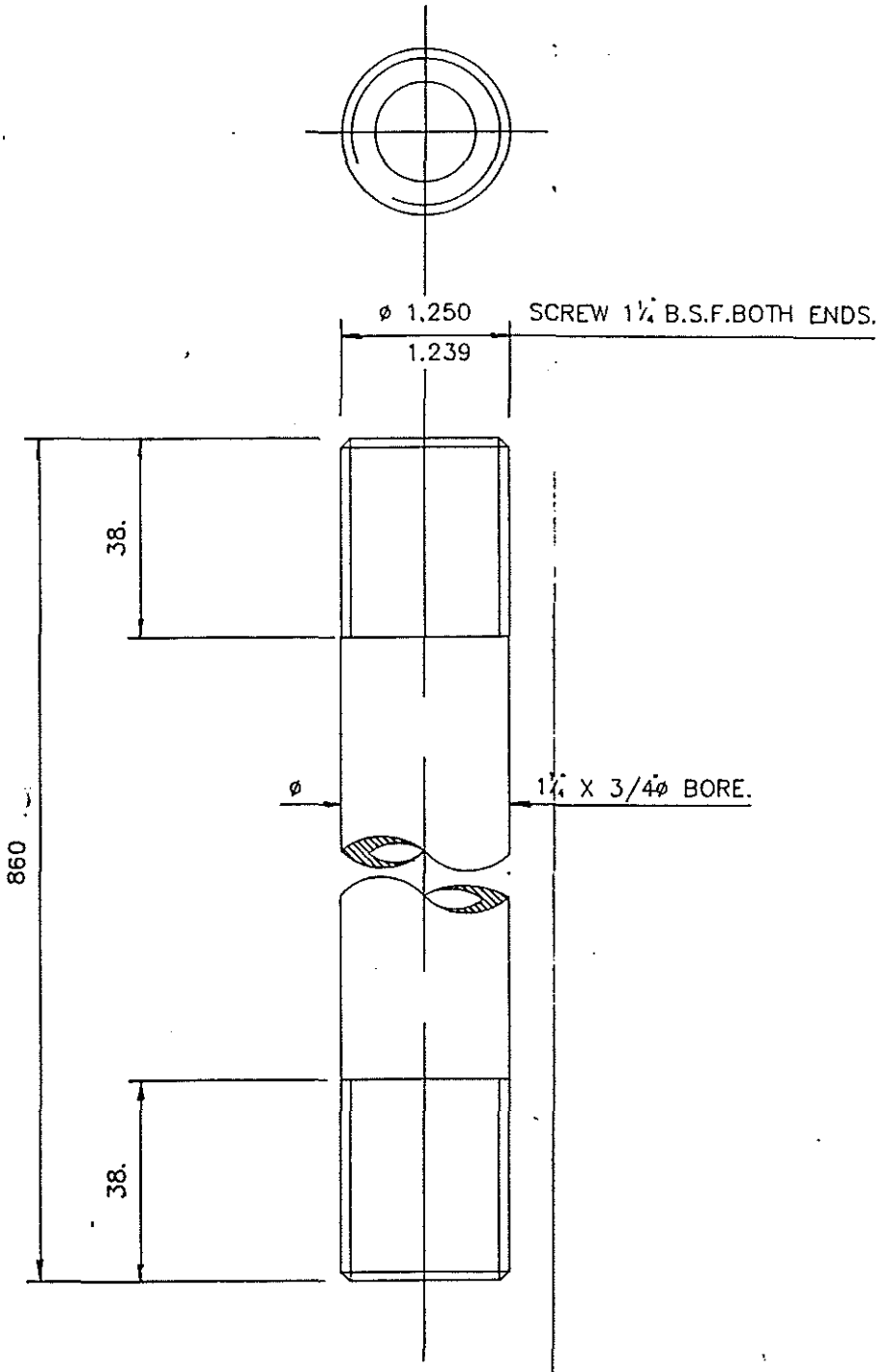
O/No. W/S	MATERIAL AL ALLOY HE-30-WP.	PROTECTIVE FINISH ANOD. NATURAL CHR MIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED ± t.o.m.						
CHECKED			.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT CERTIFIED	ISSUE	DATE
TRACED	No.OFF PER UNIT 1.	TOTAL No.OFF	.XX = ± .1m.m.					1	16/9/77
DRAWN G.J.L	DIMENSIONS IN m/m.	SCALE 1:1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE LIFTING BAR GUIDE.			DRAWING No. L.O.S./C5597		DETAIL 101

DRAWING No. I.O.S./C5597 DETAIL 102

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

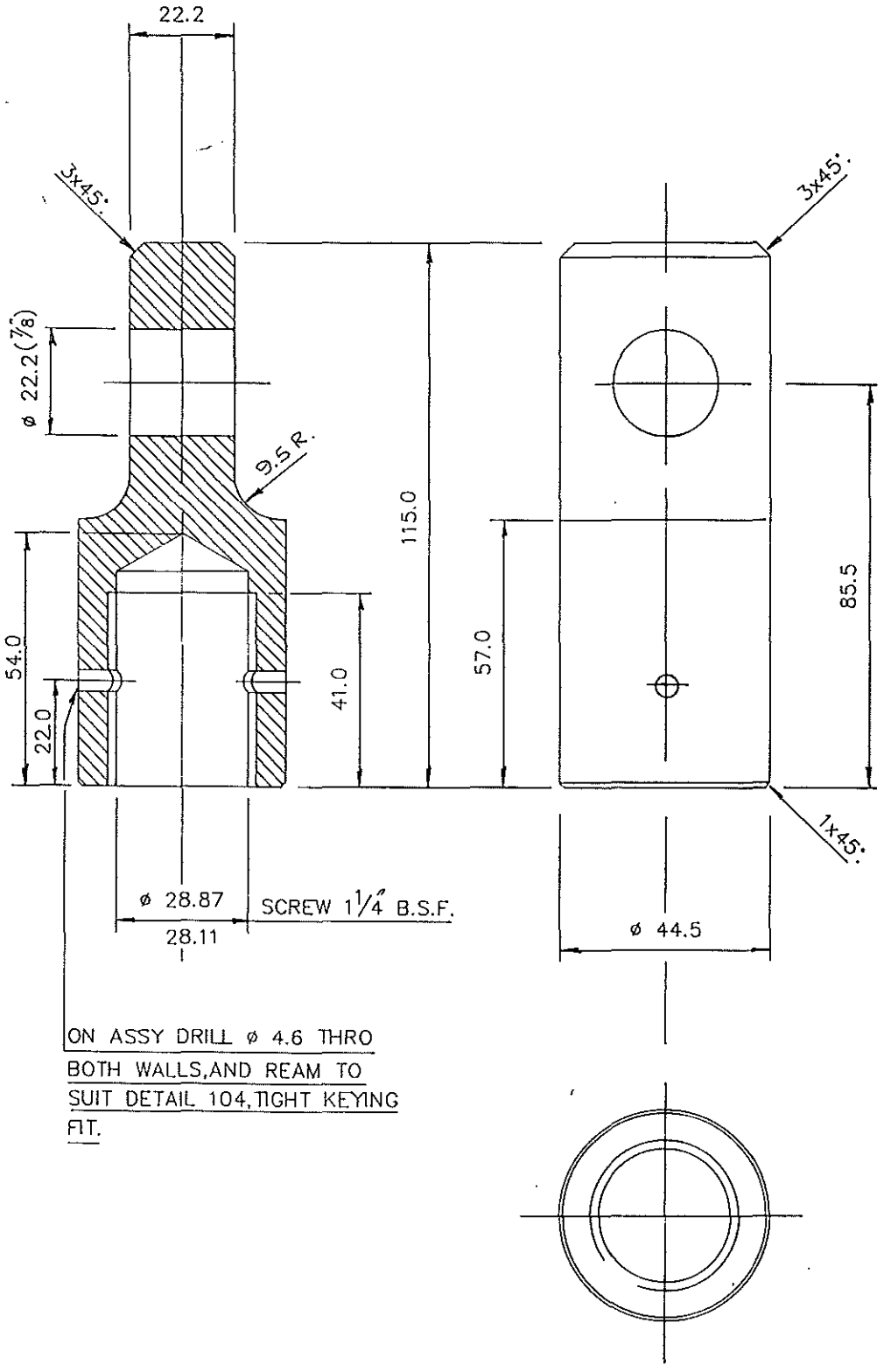
10/Sa. W/S											
CHECKED	MATERIAL ST STEEL 316 S16.	PROTECTIVE FINISH NONE.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± m.m. .X = ± .4m.m. .XX = ± .1m.m. DO NOT SCALE								
TRACED	No. OFF PER UNIT 1.	TOTAL No. OFF		AMENDMENT		ISSUE	DATE	AMENDMENT	ISSUE	DATE	
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE						CERTIFIED	1	8/10/57	
SIZE B				INSTITUTE OF OCEANOGRAPHIC SCIENCES							
				TITLE LIFTING BAR.					DRAWING No. I.O.S./C5597		DETAIL 102

DRAWING No. I.O.S./ C5597 DETAIL 103

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



ON ASSY DRILL ø 4.6 THRO BOTH WALLS, AND REAM TO SUIT DETAIL 104, TIGHT KEYING FIT.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

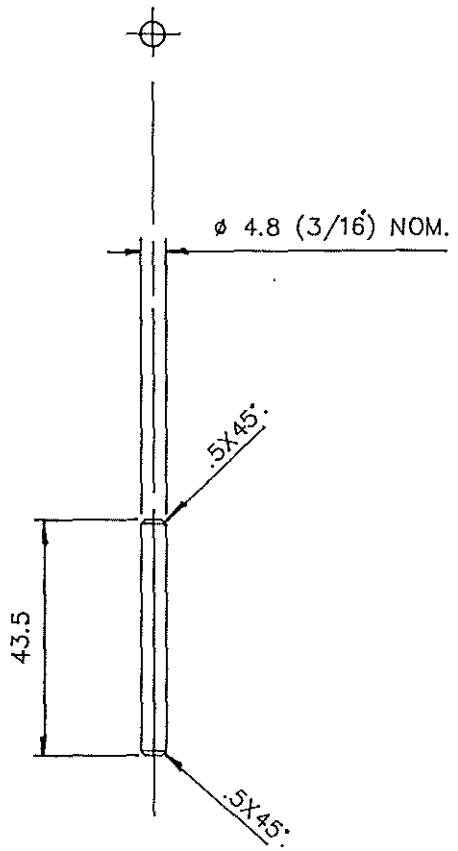
O/Ba W/S									
CHECKED	MATERIAL ST STEEL 316–S16.	PROTECTIVE FINISH NONE.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± in m.m. .X = ± .4m.m. .XX = ± .1m.m. DO NOT SCALE	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF					CERTIFIED	1.	6/10/71
DRAWN	DIMENSIONS IN m.m.	SCALE 1 : 1		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE LIFTING BAR END.				DRAWING No. L.O.S./C5597	DETAIL 103

DRAWING No.	DETAIL
I.O.S./C5597	104

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± m.m.						
CHECKED	ST STEEL 316-S16.	NONE.	.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1.	14/4/71
DRAWN	No.OFF PER UNIT 2.	TOTAL No.OFF	.XX = ± .1m.m.	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
B.J.L.	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE PIN.				DRAWING No. L.O.S./C5597	DETAIL 104

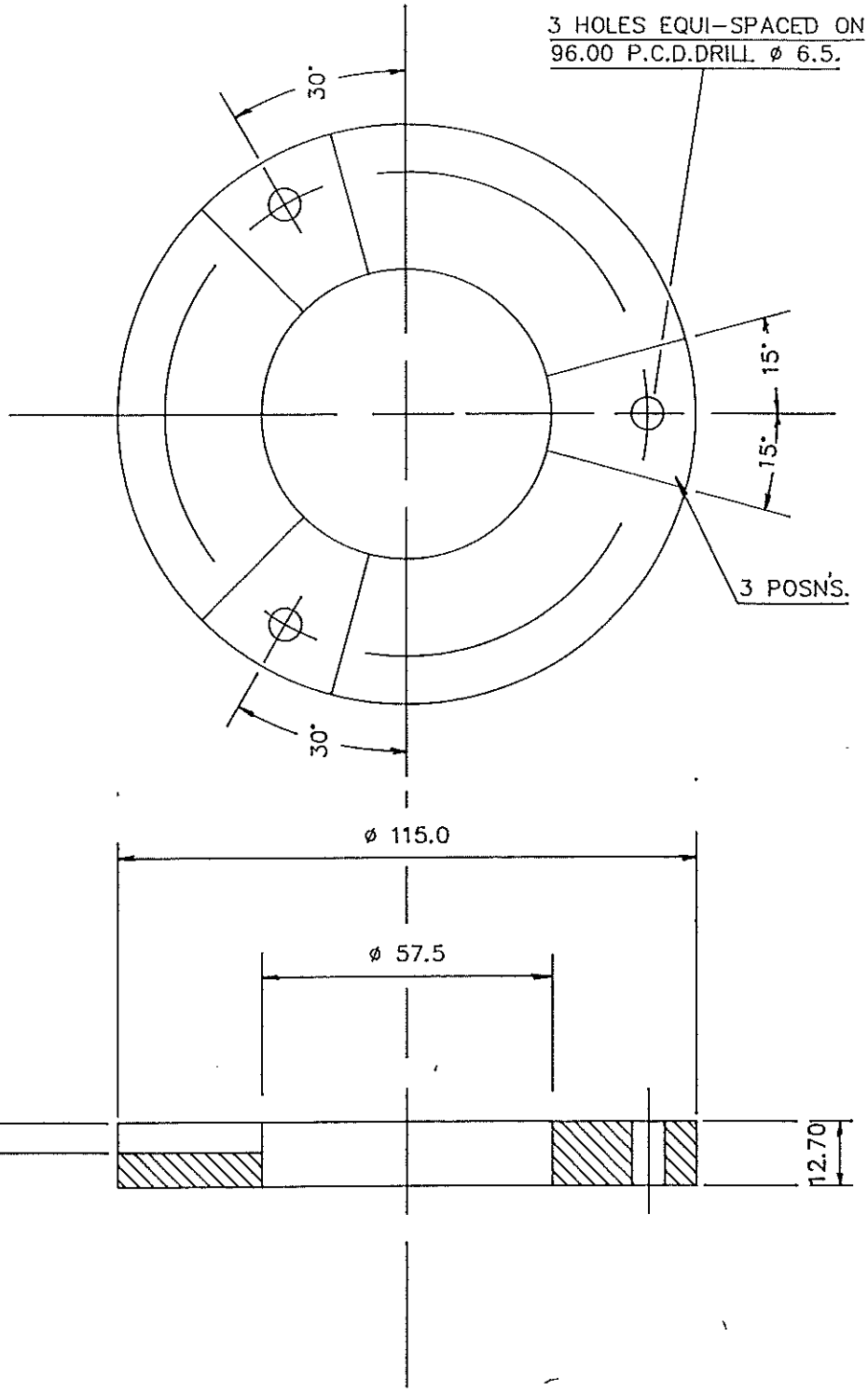
SIZE B

DRAWING No. DETAIL
I.O.S./ C5597 105

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

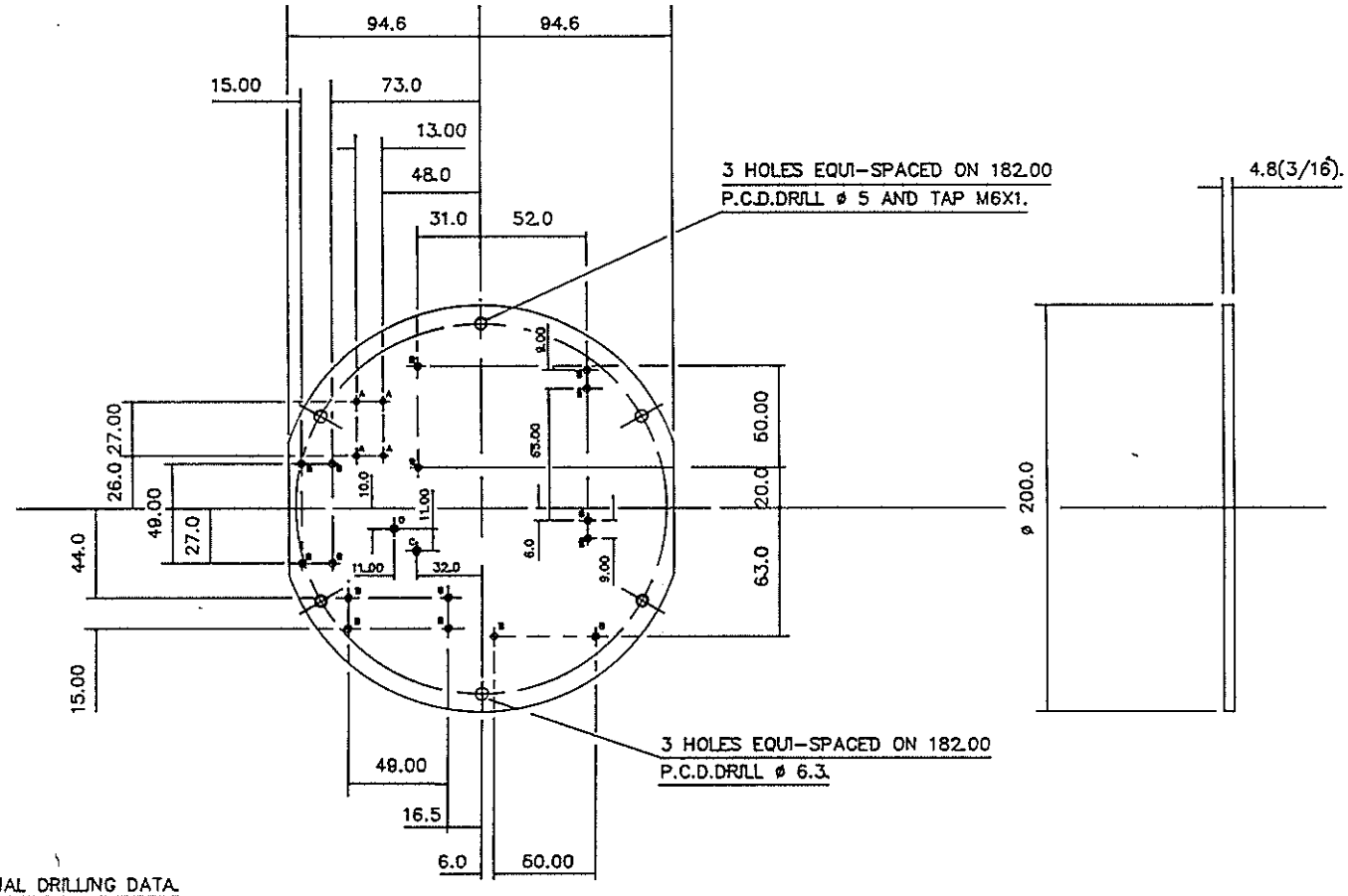
O/Ba. W/S									
CHECKED	MATERIAL POLYPROPYLENE	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± m.m.						
TRACED			.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 2.	TOTAL No.OFF	.XX = ± .1m.m.				CERTIFIED	1.	6/12/72
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE TOP HAT SPACER.			DRAWING No. L.O.S./ C5597		DETAIL 105

DRAWING No.	DETAIL
I.O.S./C5597	106.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



ADDITIONAL DRILLING DATA.

4 HOLES (A) DRILL ø 2.5 AND TAP M3X.5.

16 HOLES (B) DRILL ø 3.5.

2 HOLES (C) DRILL ø 3.3 AND TAP M4X.7.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

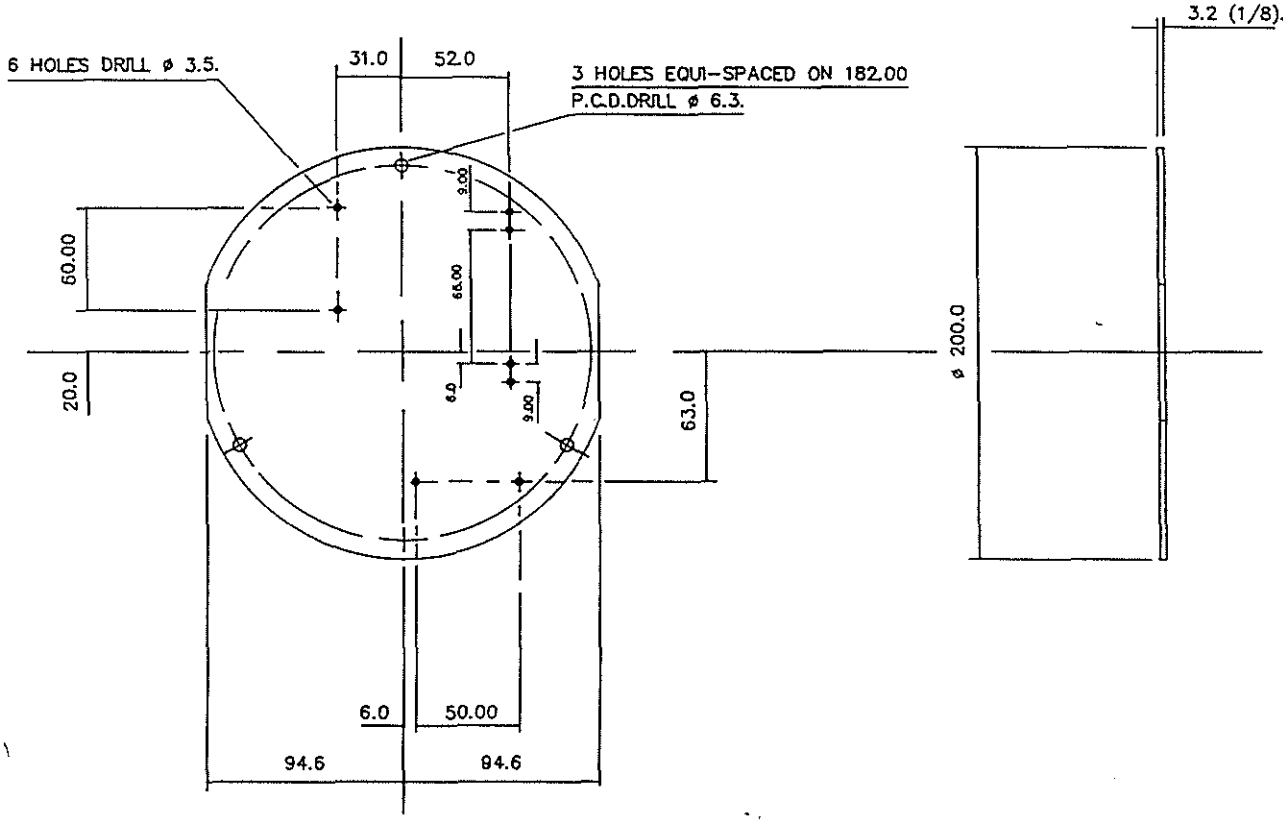
O/No. W/S									
CHECKED	MATERIAL AL ALLOY HS-30-WP.	PROTECTIVE FINISH ANODISE NATURAL CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. x=+/-.4m.m. xx=+/-.1m.m.						
TRACED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 1.	TOTAL No.OFF					CERTIFIED	1.	13/11/92.
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE C				TITLE FLUXGATE MOUNTING PLATE.			DRAWING No. I.O.S./C5597		DETAIL 106.

DRAWING No.	DETAIL
I.O.S./C5597	107.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

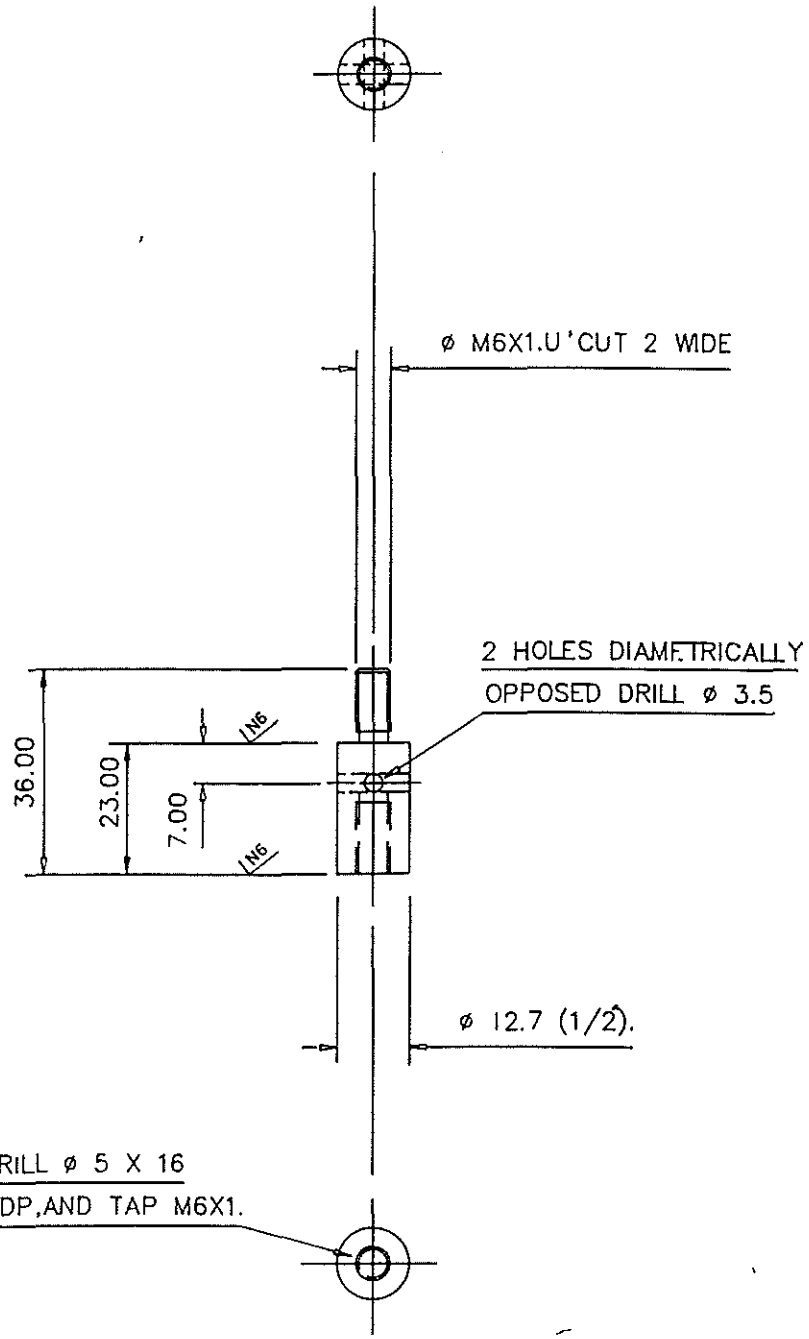
O/No. W/S	MATERIAL RIGID P.V.C.	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: 1m.m. 10=+/-.4m.m. 100=+/-.1m.m.						
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1.	18/11/92
	No.OFF PER UNIT 1.	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE PROTECTOR PLATE.			DRAWING No. I.O.S./C5597		DETAIL 107.
SIZE C									

DRAWING No. I.O.S./C5597 DETAIL 108

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/Ba W/S									
CHECKED	MATERIAL AL ALLOY -RE-30-WP.	PROTECTIVE FINISH ANODISE CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± m.m. .X = ± .4m.m. .XX = ± .1m.m. DO NOT SCALE	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED		
DRAWN B.H.	No.OFF PER UNIT 3.	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE		TITLE BOARD SPACER 1.				DRAWING No. I.O.S./C5597	DETAIL 108

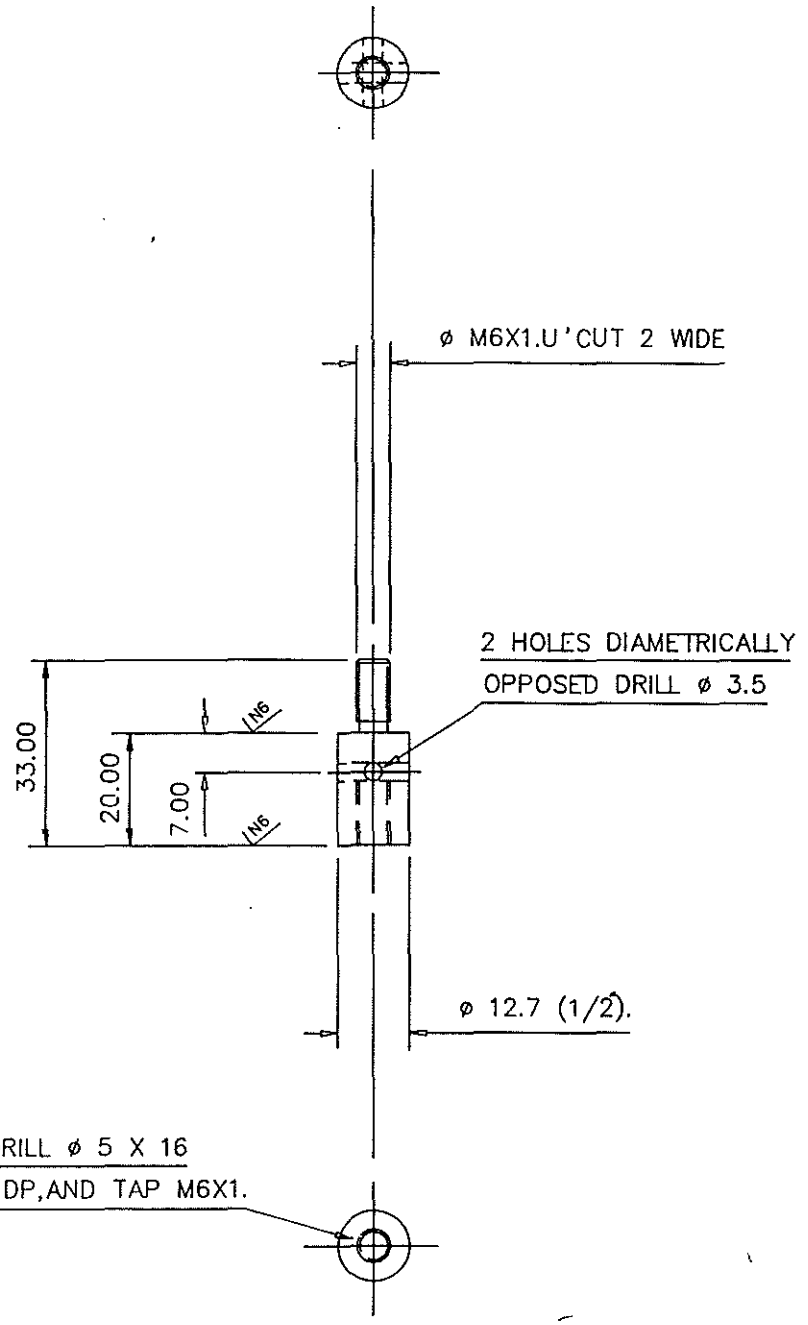
SIZE B

DRAWING No. I.O.S./C5597 DETAIL 108.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

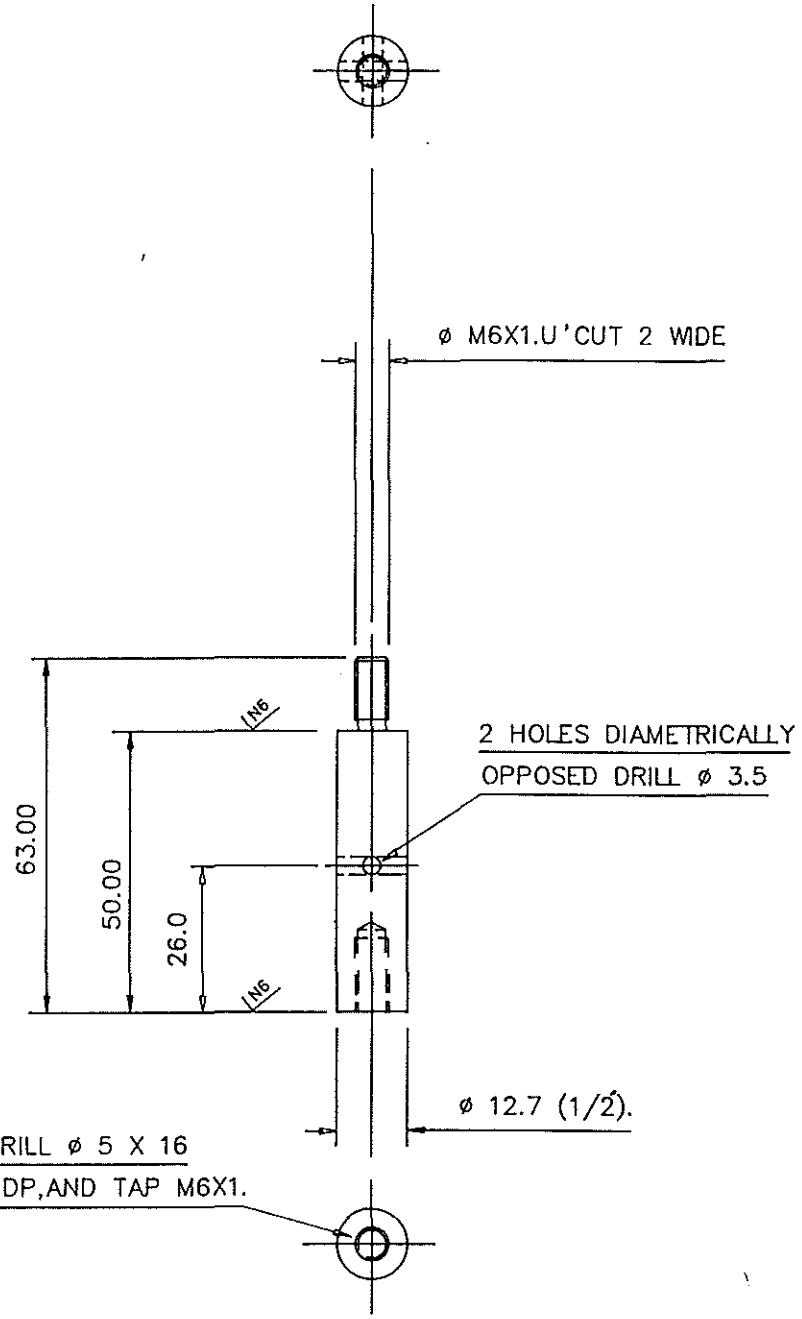
O/Ba B/S								
CHECKED	MATERIAL AL ALLOY HE-30-WP.	PROTECTIVE FINISH ANODISE CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± t/o.m. .X = ± .4m.m. .XX = ± .1m.m. DO NOT SCALE	AMENDMENT	ISSUE	DATE	AMENDMENT CERTIFIED	ISSUE 1. DATE 19/11/73
TRACED	No.OFF PER UNIT 3.	TOTAL No.OFF						
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE		INSTITUTE OF OCEANOGRAPHIC SCIENCES				
SIZE B				TITLE BOARD SPACER 2.			DRAWING No. I.O.S./C5597	DETAIL 108.

DRAWING No. I.O.S./C5597 DETAIL 110

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

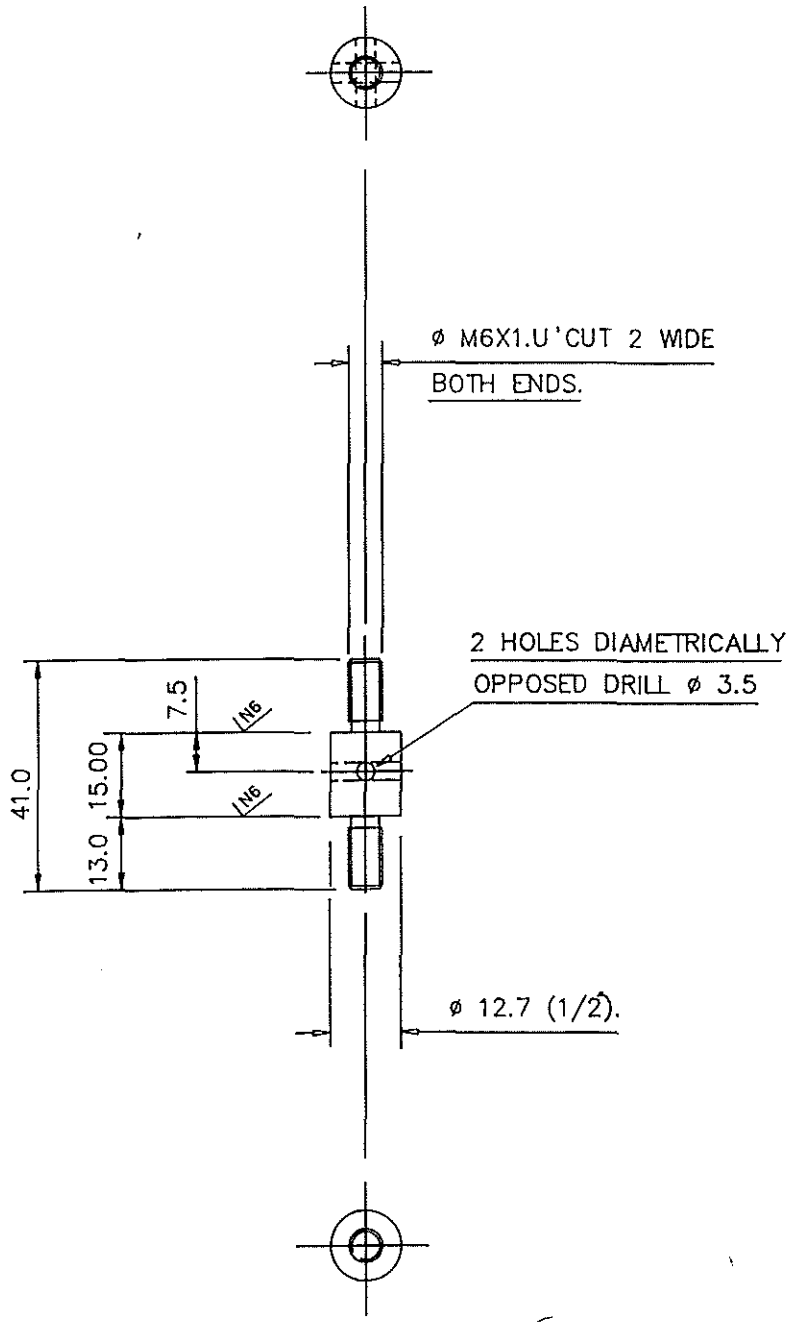
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± in.m.						
CHECKED	AL ALLOY HE-30-WP.	ANODISE CHROMIC ACID.	.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 3.	TOTAL No.OFF	.XX = ± .1m.m.				CERTIFIED	1.	
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE BOARD SPACER 3.				DRAWING No. I.O.S./C5597	DETAIL 110

DRAWING No. I.O.S./C5597 DETAIL 111

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S									
CHECKED	MATERIAL AL ALLOY HE-30-WP.	PROTECTIVE FINISH ANODISE CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± in m.m. .X = ± .4m.m. .XX = ± .1m.m. DO NOT SCALE						
TRACED	No.OFF PER UNIT 3.	TOTAL No.OFF		AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE					CERTIFIED	1.	19/11/79

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE BOARD SPACER 4.

DRAWING No. I.O.S./C5597 DETAIL 111

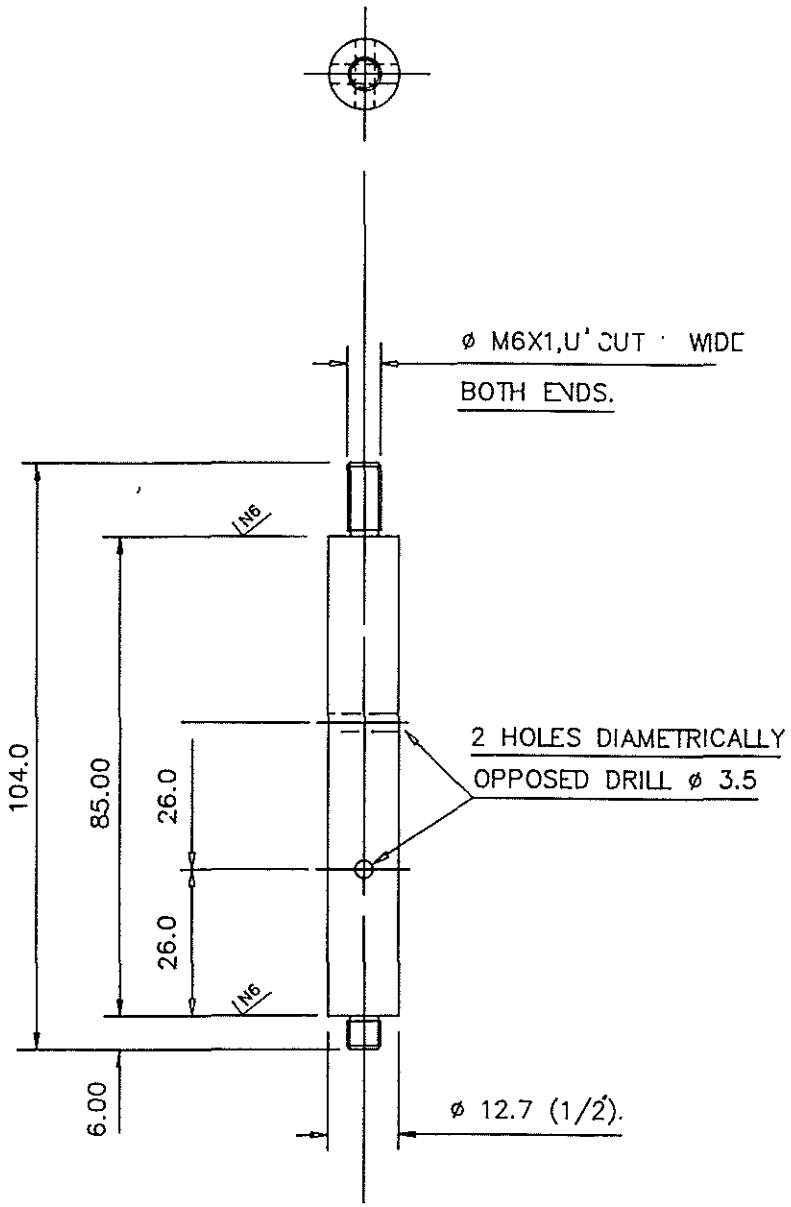
SIZE B

DRAWING No. I.O.S./C5597 DETAIL 112

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/Bo. W/S	MATERIAL AL ALLOY HE-30- WP.	PROTECTIVE FINISH ANODISE CHROMIC \CID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± t/o.m. .X = ± .4m.m. .XX = ± .1m.m. DO NOT SCALE								
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 3.	TOTAL No.OFF					CERTIFIED	1.	10/11/77
DRAWN B.J.H.	DIMENSIONS IN m.m.	SCALE		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE INCLINOMETER SPACER.				DRAWING No. I.O.S./C5597	DETAIL 12

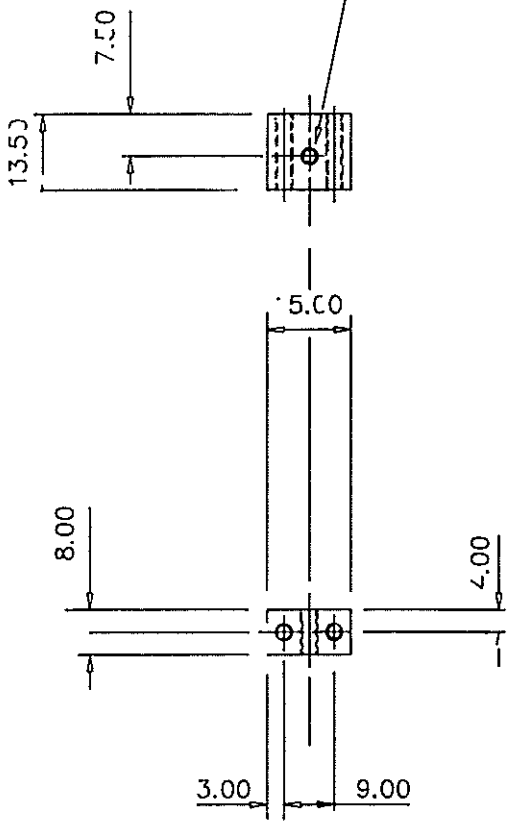
RAWING N. .O S./ C5597 DETAIL 113

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

ISED ON

3 HOLES DRILL ø 2.5 AND TAP M3 / .5



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

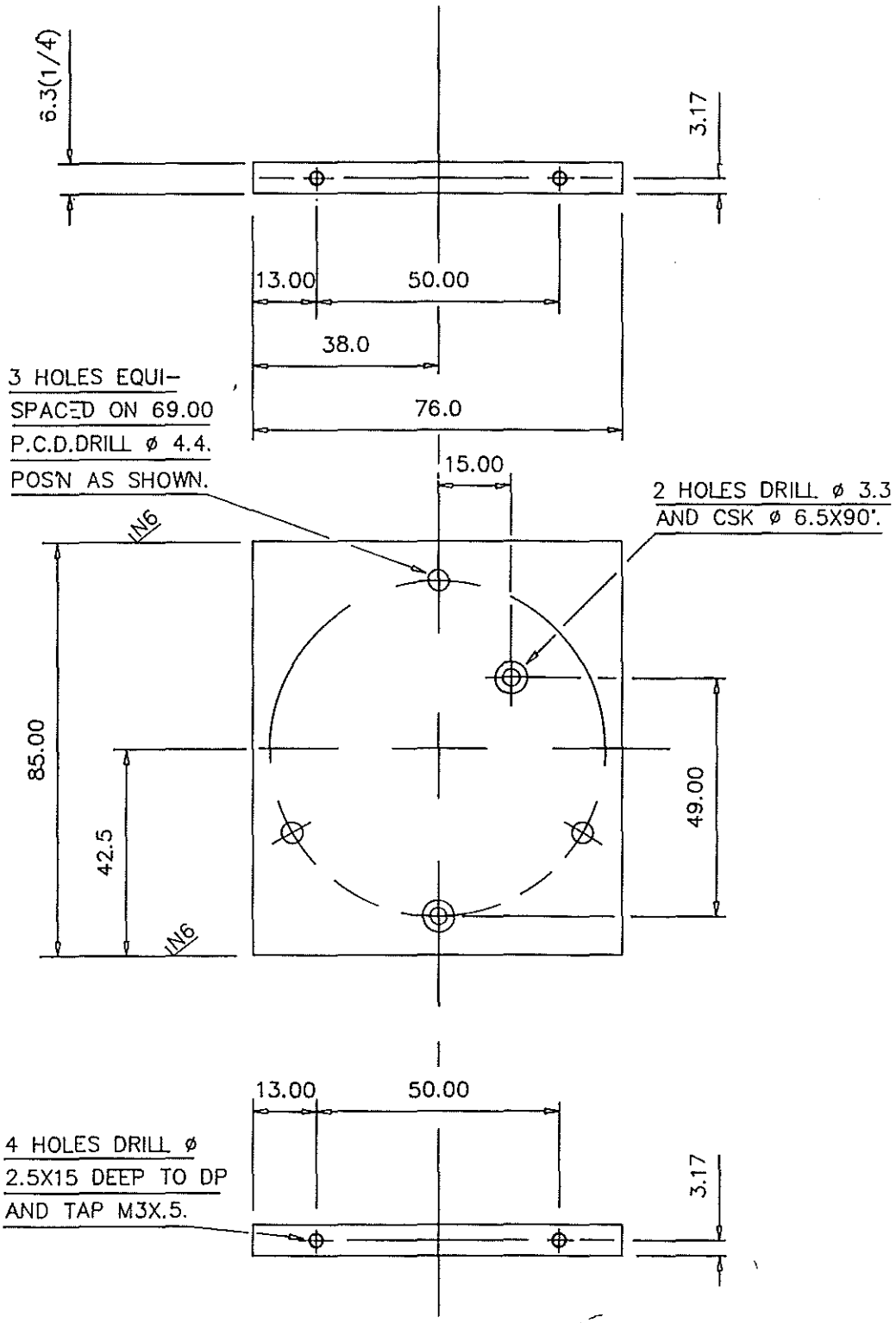
/No. W/S	MATERIAL AL ALLOY HF-30-WP.	PROTECTIVE FINISH ANODISE CHROMIC ACID.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: .1 m.m. .X = ± .-m.m. .XX = ± .1m.m. DO NOT SCALE							
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE	
DR CED	No.OFF PER UNIT 4.	TO AL No.OFF					CERTIFIED	1.		
DRAWN BJL	DIMENSIONS IN m.m.	SCALE		INSTITUTE OF OCEANOGRAPHIC SCIENCES						
SIZE B				TITLE GYRO - OARD SPACER.				DRAWING No I.O.S./C5597		DETAIL 1 3

DRAWING No. I.O.S./C5597 DETAIL 114

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

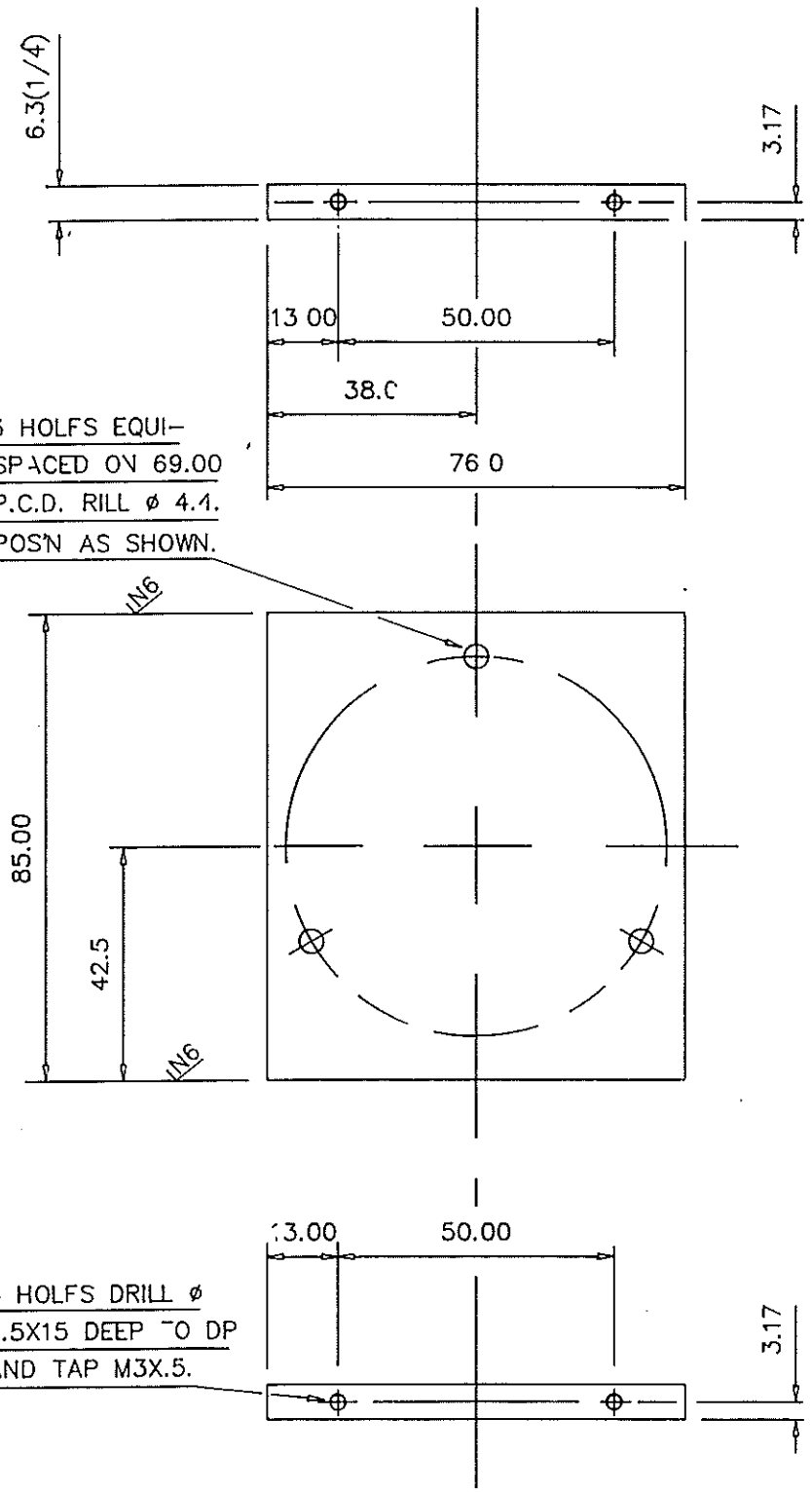
O/No. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1/0.m.							
CHECKED	AL ALLOY HE-30-WP.	ANODISE NAT' CHROMIC ACID.	.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 1.	TOTAL No.OFF	.XX = ± .1m.m.				CERTIFIED	1.	
DRAWN B.J.L.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE INCLINOMETER SUPPORT.1.				DRAWING No. I.O.S./C5597		DETAIL 114

DRAWING No. I.O.S./ C5597 DETAIL 115.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

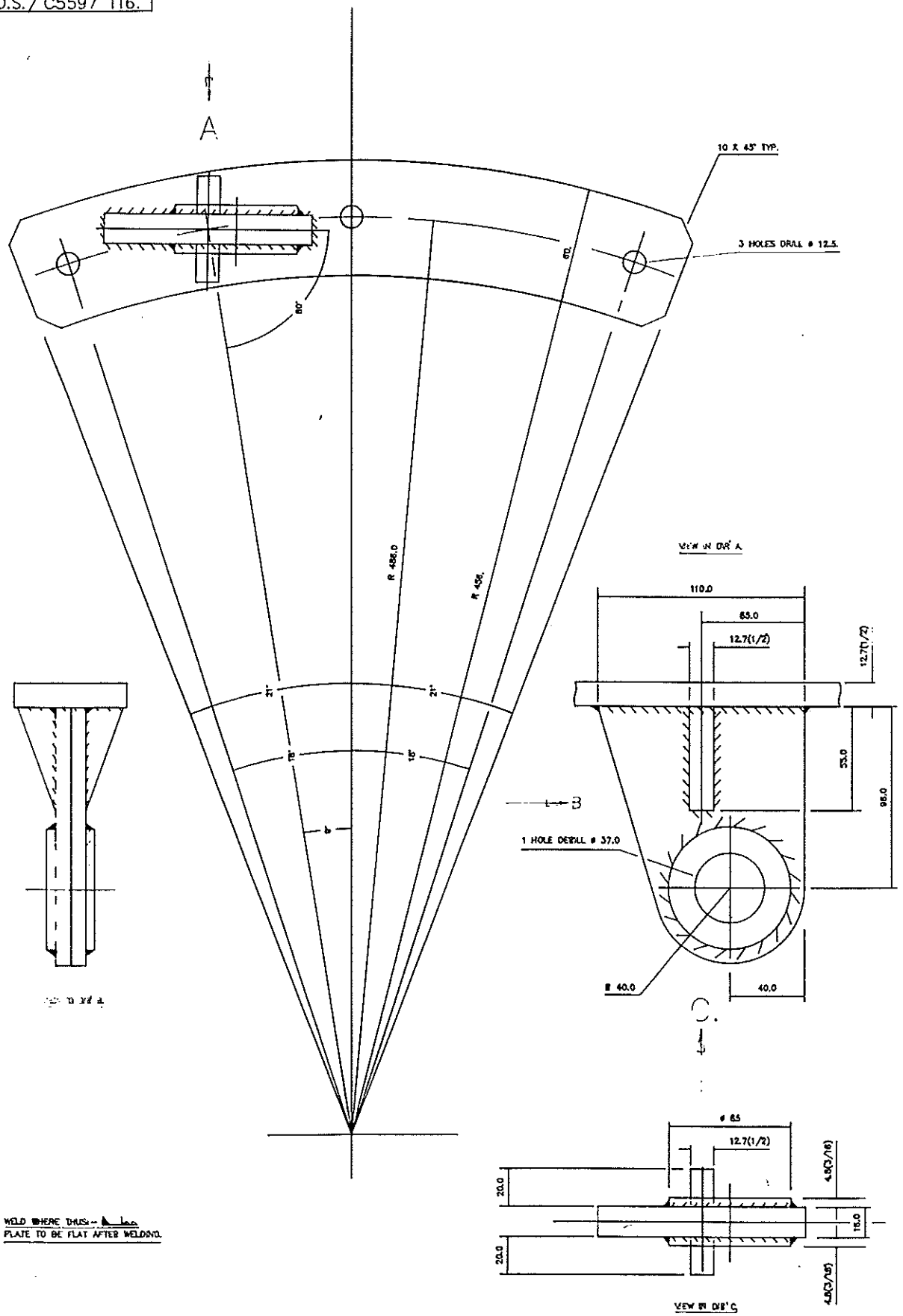
O/Ba. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± tho.m.						
CHECKED	AL ALLOY HE-30-WP.	ANODISE NAT' CHROMIC ACID.	.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 1.	TOTAL No.OFF	.XX = ± .1m.m.				CERTIFIED	1.	
DRAWN B.J.L.	DIMENSIONS IN m/m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE INCLINOMETER SUPPORT. 2.			DRAWING No. I.O.S./ C5597		DETAIL 115.

DRAWING No. I.O.S./C5597 DETAIL 116.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc., SEE B.S.308.

USED ON



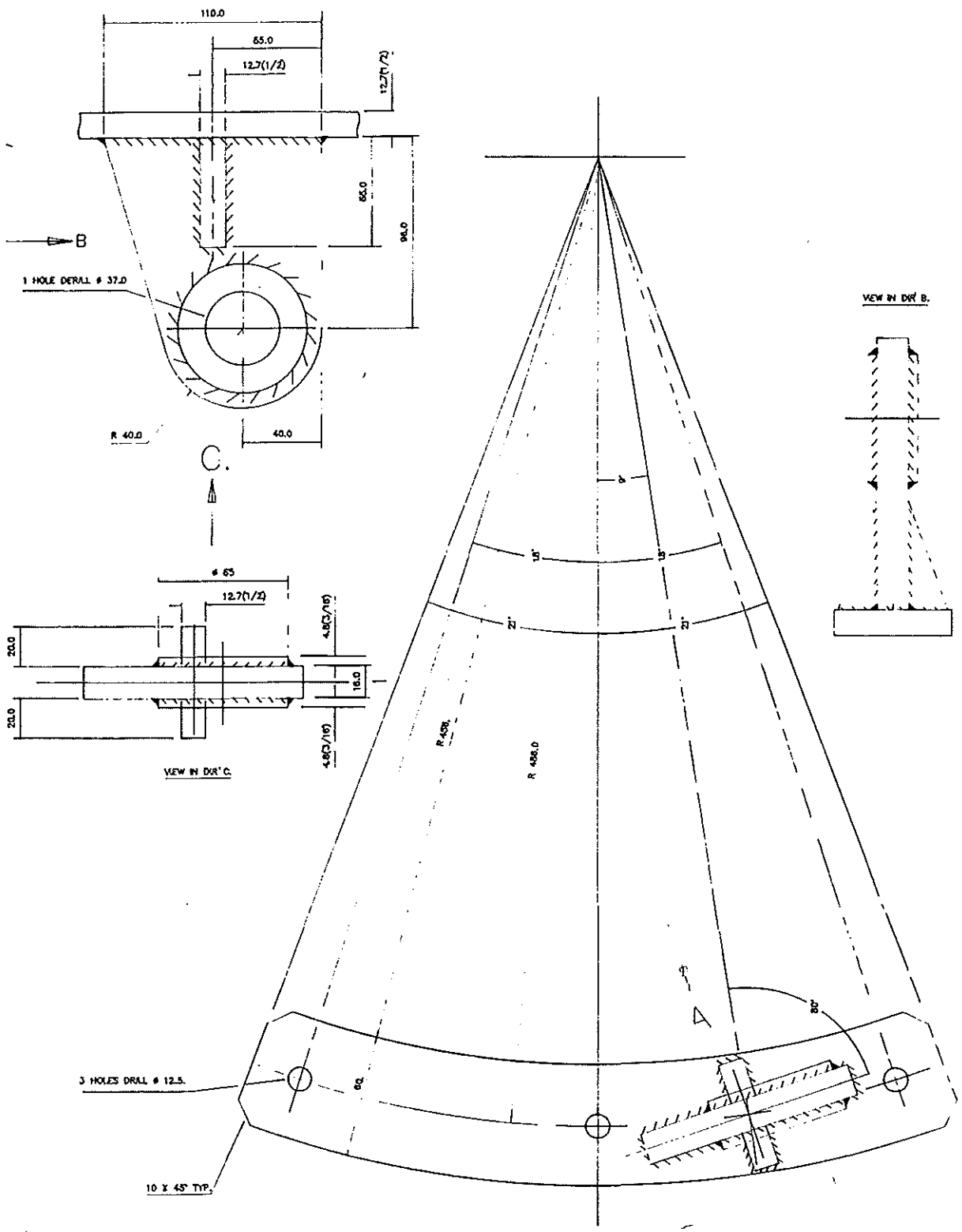
WELD WHERE THUS: PLATE TO BE FLAT AFTER WELDING.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/Ba. W/S	MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1m.m.						
CHECKED	MILD STEEL	PAINT RED OXIDE.	.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 1.	TOTAL No.OFF	.XX = ± .1m.m.				CERTIFIED	1	1/11/92
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE ANCHOR POINT 'A'.				DRAWING No. I.O.S./C5597	DETAIL 116.

DRAWING No. I.O.S./ C5597 | DETAIL 117. | THIRD ANGLE PROJECTION | FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



WELD WHERE THUS: ▲ ⌒

PLATE TO BE FLAT AFTER WELDING.

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

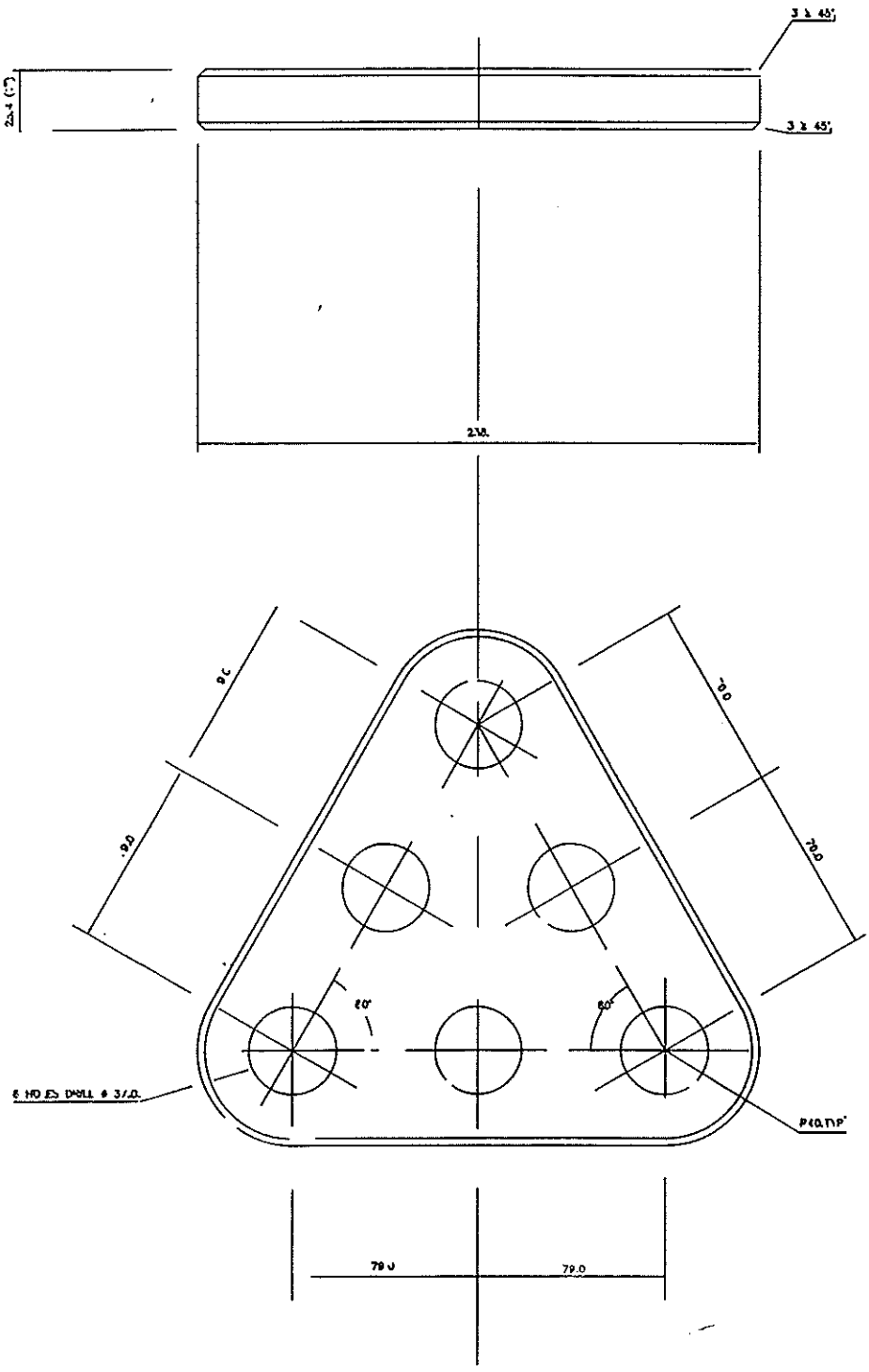
10/Bo. W/S										
CHECKED	MATERIAL MILD STEEL	PROTECTIVE FINISH PAINT RED OXIDE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1m.m. .X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT CERTIFIED	ISSUE 1	DATE 2/11/71	
TRACED	No.OFF PER UNIT 1.	TOTAL No.OFF	.XX = ± .1m.m.	INSTITUTE OF OCEANOGRAPHIC SCIENCES						
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE ANCHOR POINT 'B'.			DRAWING No. I.O.S./ C5597		DETAIL 117.	
SIZE B										

DRAWING No. O.S./C5597 DETAIL 118.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



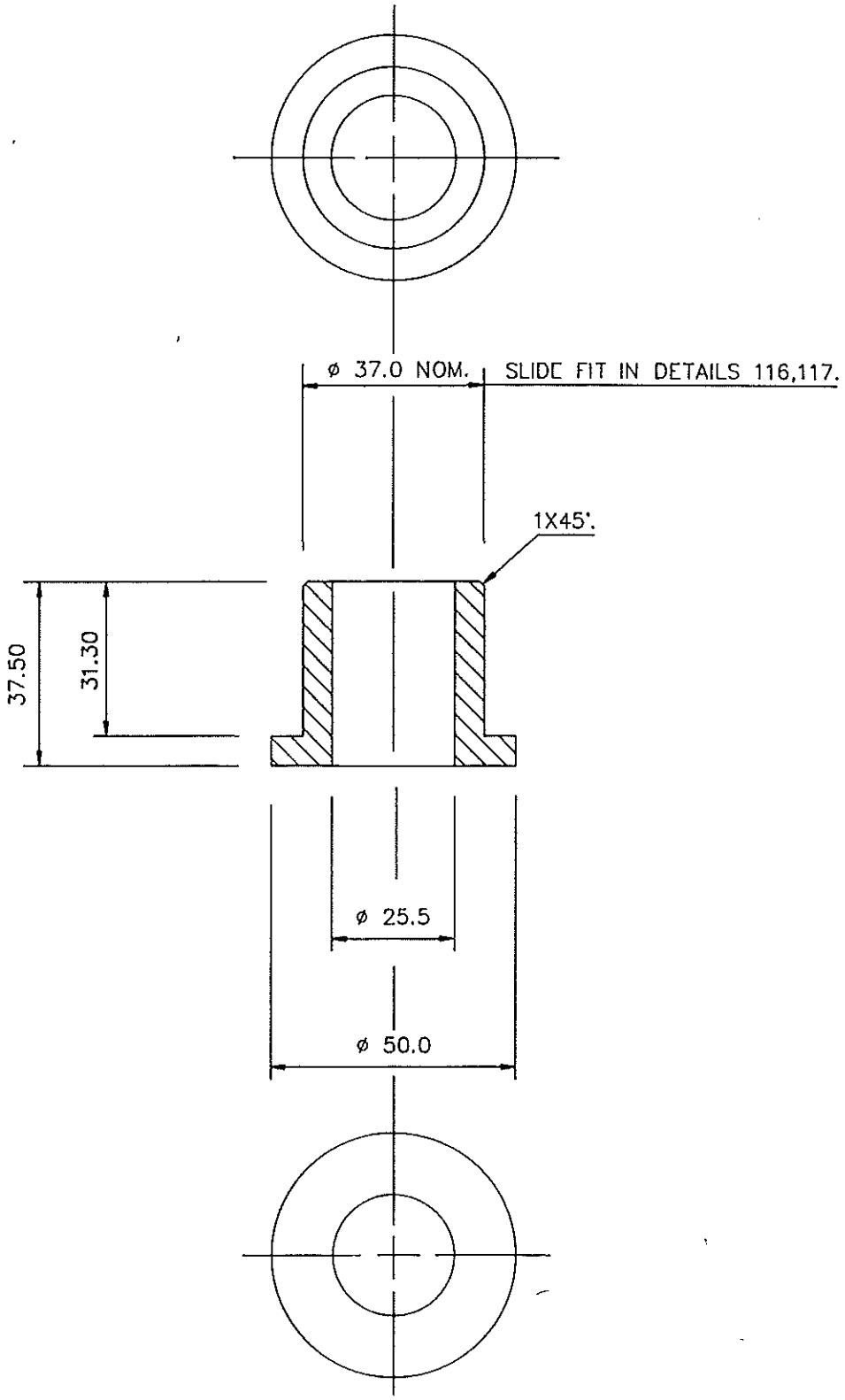
REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S									
CHECKED	MATERIAL MILD STEEL	PROTECTIVE FINISH GALVANISE	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1m.m. .X = ± .4m.m.						
TRACED			XX = ± .1m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT CERTIFIED	ISSUE	DATE
	No.OFF PER UNIT 1.	TOTAL No.OFF						1	4/7/71
DRAWN B.J.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE SPREADER PLATE.			DRAWING No. I.O.S./C5597		DETAIL 118.

DRAWING No. I.O.S./ C5597 DETAIL 119

THIRD ANGLE PROJECTION

F P EXPLANATION OF DIMENSIONS,NOTES,SYM LS etc SEE B.S.308.



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL POLYPROPYLENE	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1m.m.					
CHECKED			.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT CERTIFIED	ISSUE 1 DATE 7/12/84
TRACED	No.OFF PER UNIT 2	TOTAL No.OFF	.XX = ± .1m.m.					
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE ANCHOR POINT BUSH.			INSTITUTE OF OCEANOGRAPHIC SCIENCES	DRAWING No. I.O.S./ C5597 DETAIL 119

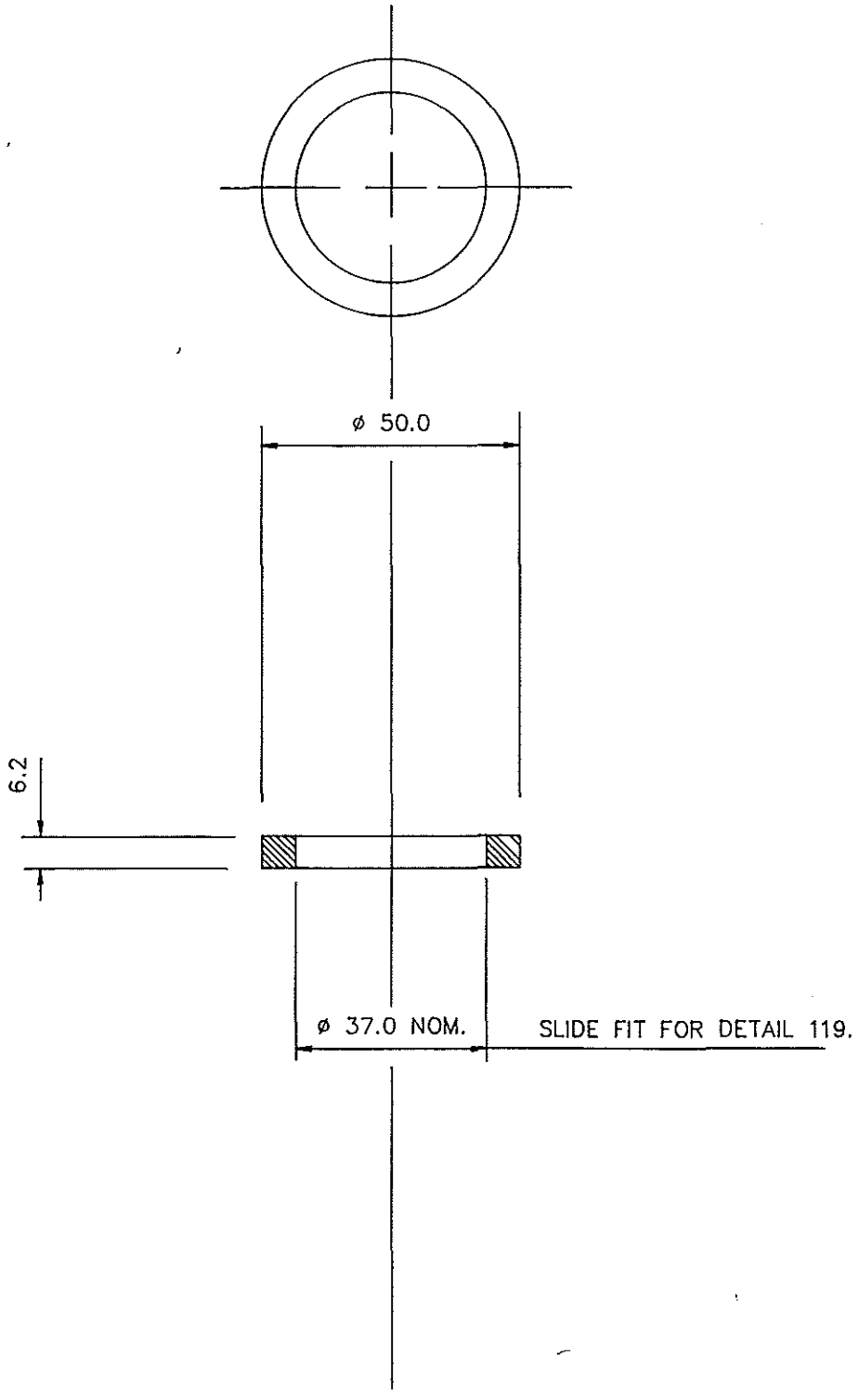
SIZE B

DRAWING No. DETAIL I.O.S./ C5597 120.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S

CHECKED

TRACED

DRAWN B.H.

SIZE B

MATERIAL POLYPROPYLENE	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1m.m. .X = ± .4m.m. .XX = ± .1m.m. DO NOT SCALE	
No.OFF PER UNIT 2	TOTAL No.OFF		
DIMENSIONS IN m.m.	SCALE		

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			CERTIFIED	1.	7/12/78

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE ANCHOR BUSH WASHER.

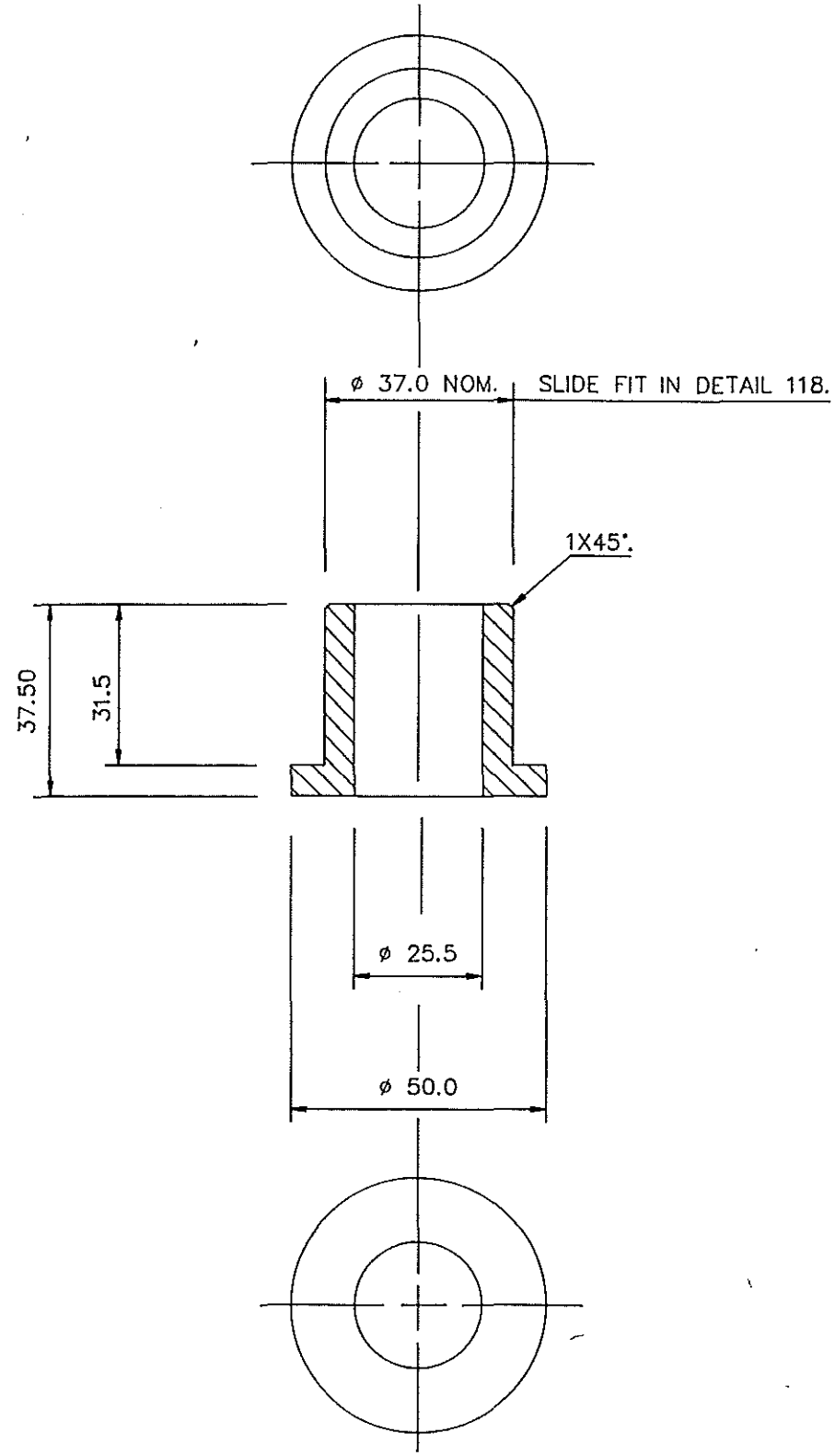
DRAWING No. DETAIL I.O.S./C5597 120.

DRAWING No. I.O.S./ C5597 DETAIL 121

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL POLYPROPYLENE	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1m.m. .X = ± .4m.m. .XX = ± .1m.m. DO NOT SCALE						
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	7/11/91
DRAWN B.H.	No.OFF PER UNIT 3.	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE		TITLE SPREADER PLATE BUSH.			DRAWING No. I.O.S./C5597	DETAIL 121	

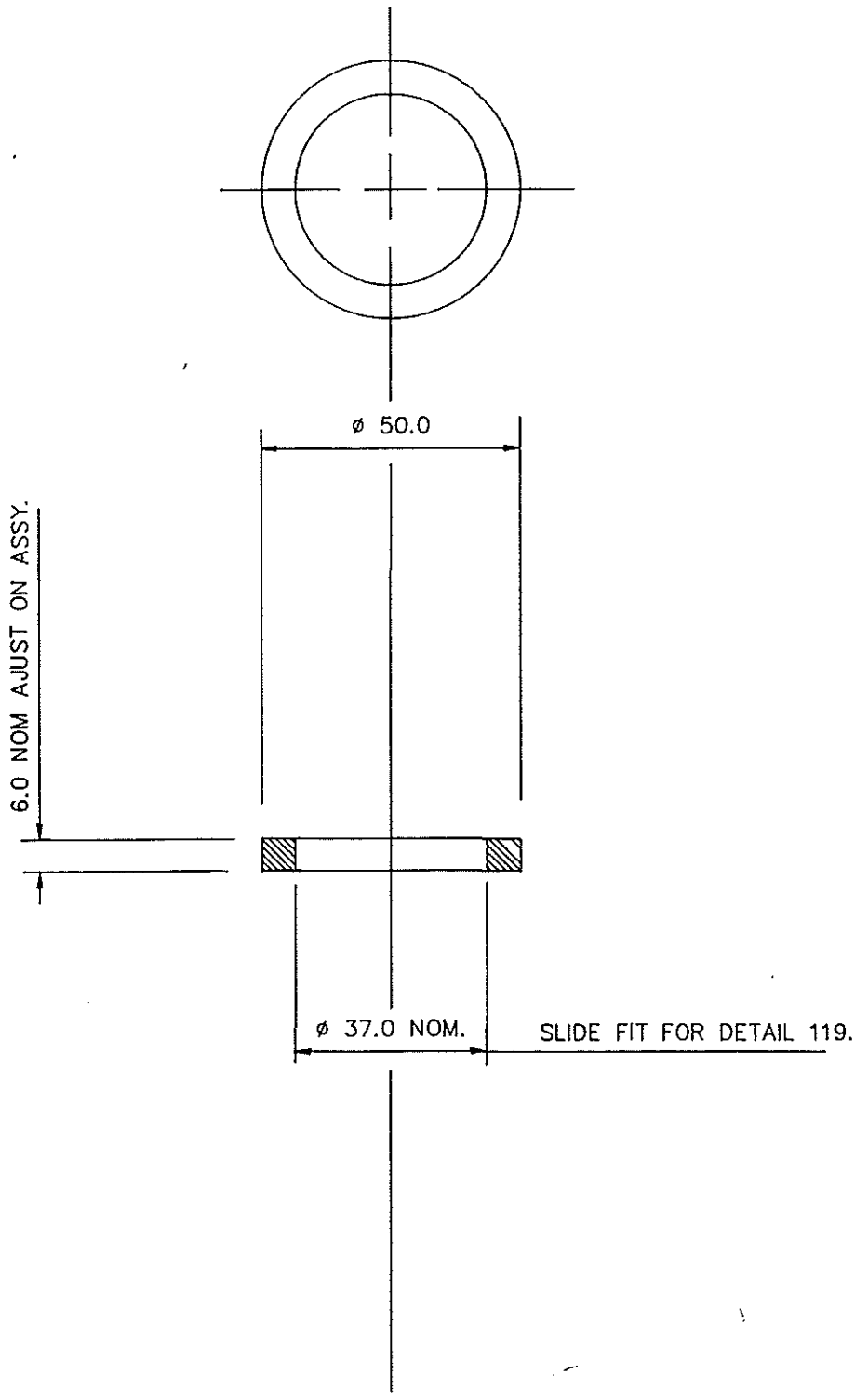
SIZE B

DRAWING No. I.O.S./ C5597 DETAIL 122

THIRD ANGLE PROJECTION

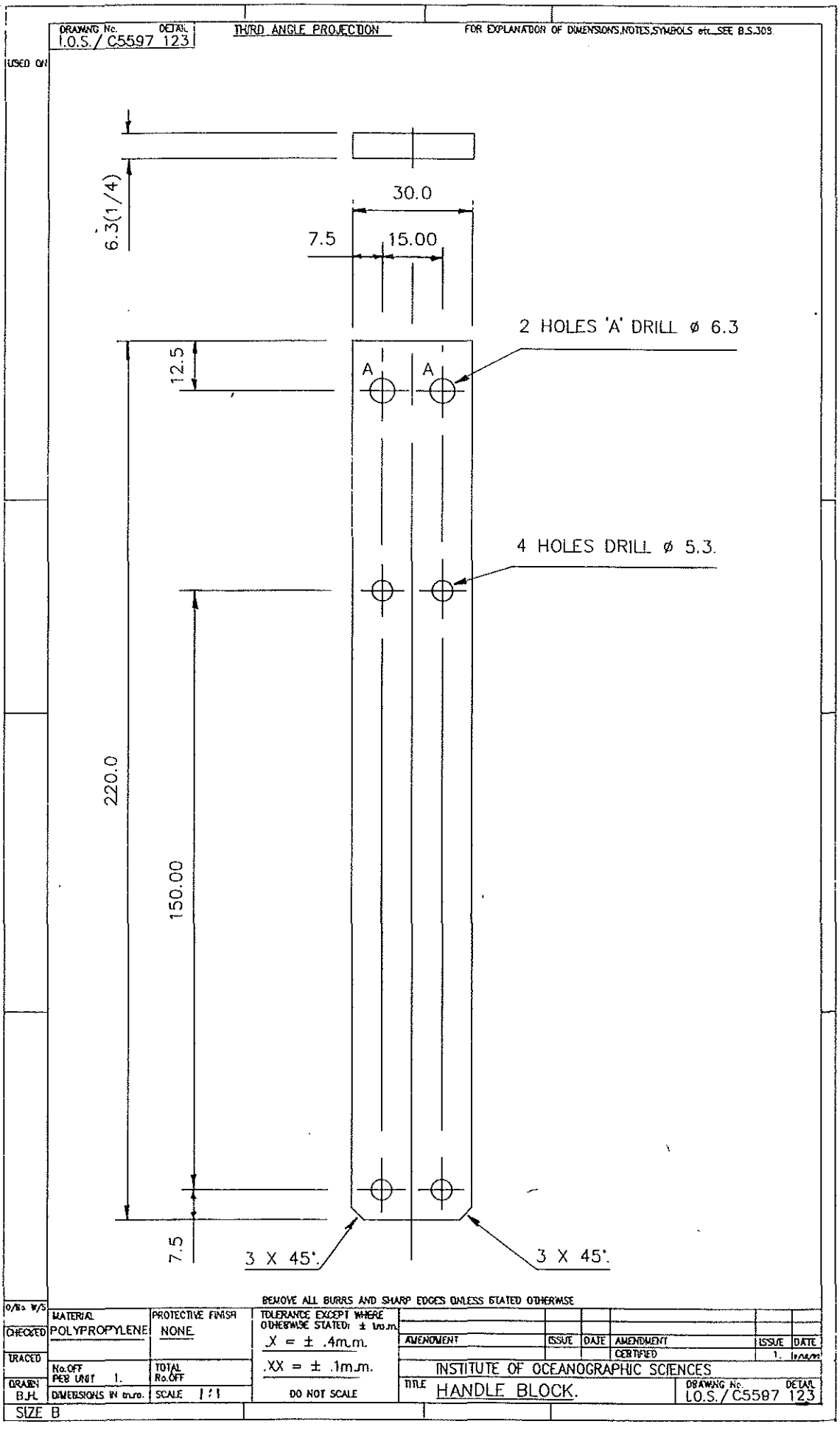
FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S									
CHECKED	MATERIAL POLYPROPYLENE	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1m.m.						
TRACED			.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 3.	TOTAL No.OFF	.XX = ± .1m.m.				CERTIFIED	1.	7/11/95
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE SPREADER PLATE WASHER.			DRAWING No. I.O.S./ C5597		DETAIL 122

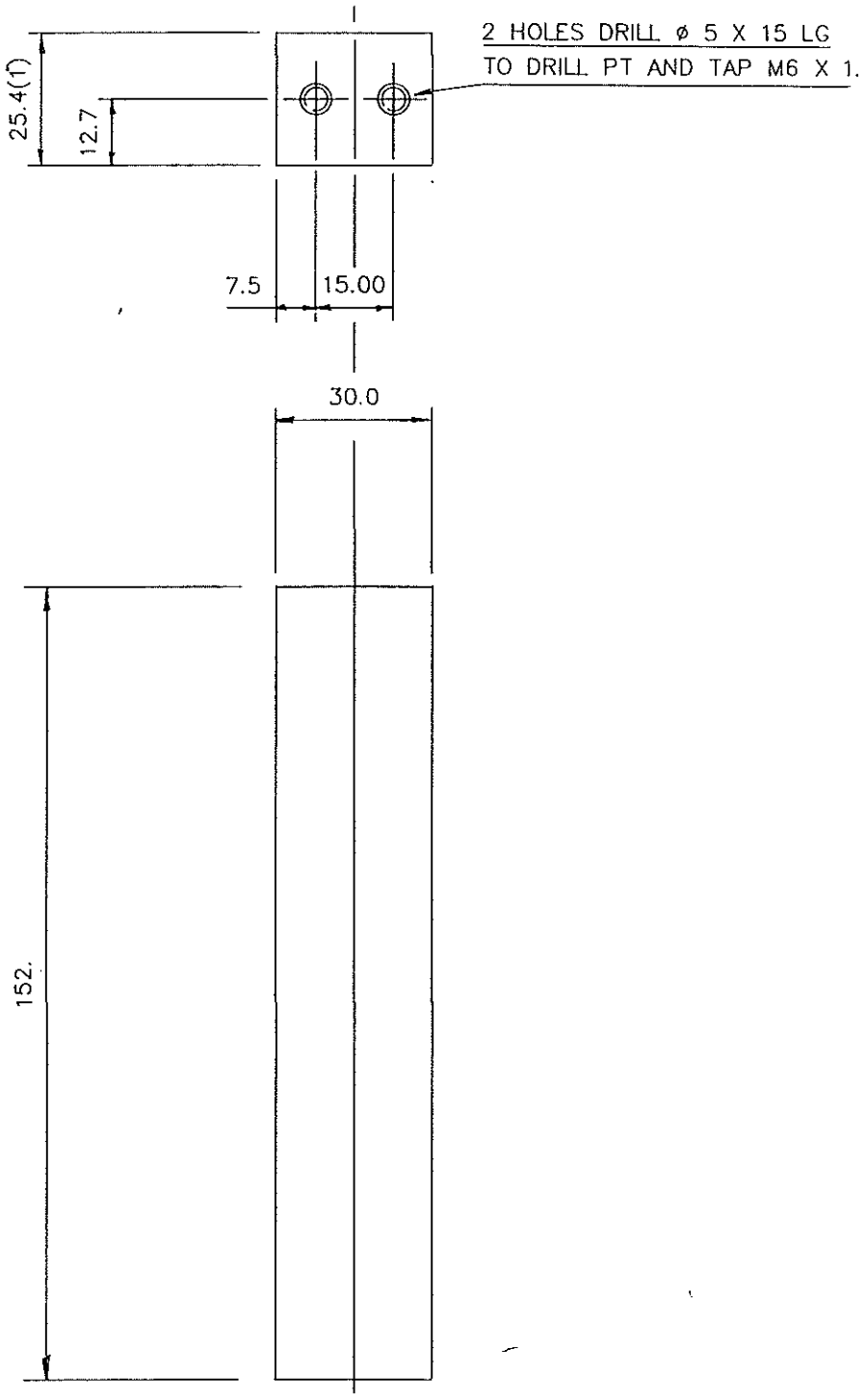

DRAWING No. DETAIL
I.O.S./C5597 123
THIRD ANGLE PROJECTION
FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308
USED ON
6.3(1/4)
30.0
7.5
15.00
2 HOLES 'A' DRILL ø 6.3
12.5
A
A
4 HOLES DRILL ø 5.3.
220.0
150.00
7.5
3 X 45°.
3 X 45°.
REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE
O/All W/S
CHECKED
TRACED
DRAWN B.H.
MATERIAL POLYPROPYLENE
PROTECTIVE FINISH NONE
No.OFF PER UNIT 1.
TOTAL No.OFF
DIMENSIONS IN m.m.
SCALE 1/1
TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± m.m.
.X = ± .4m.m.
.XX = ± .1m.m.
DO NOT SCALE
AMENDMENT ISSUE DATE
AMENDMENT ISSUE DATE
CERTIFIED 1.
INSTITUTE OF OCEANOGRAPHIC SCIENCES
TITLE HANDLE BLOCK.
DRAWING No. DETAIL
I.O.S./C5597 123
SIZE B

DRAWING No. I.O.S./C5597 DETAIL 124.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS, NOTES, SYMBOLS etc. SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES, UNLESS STATED OTHERWISE

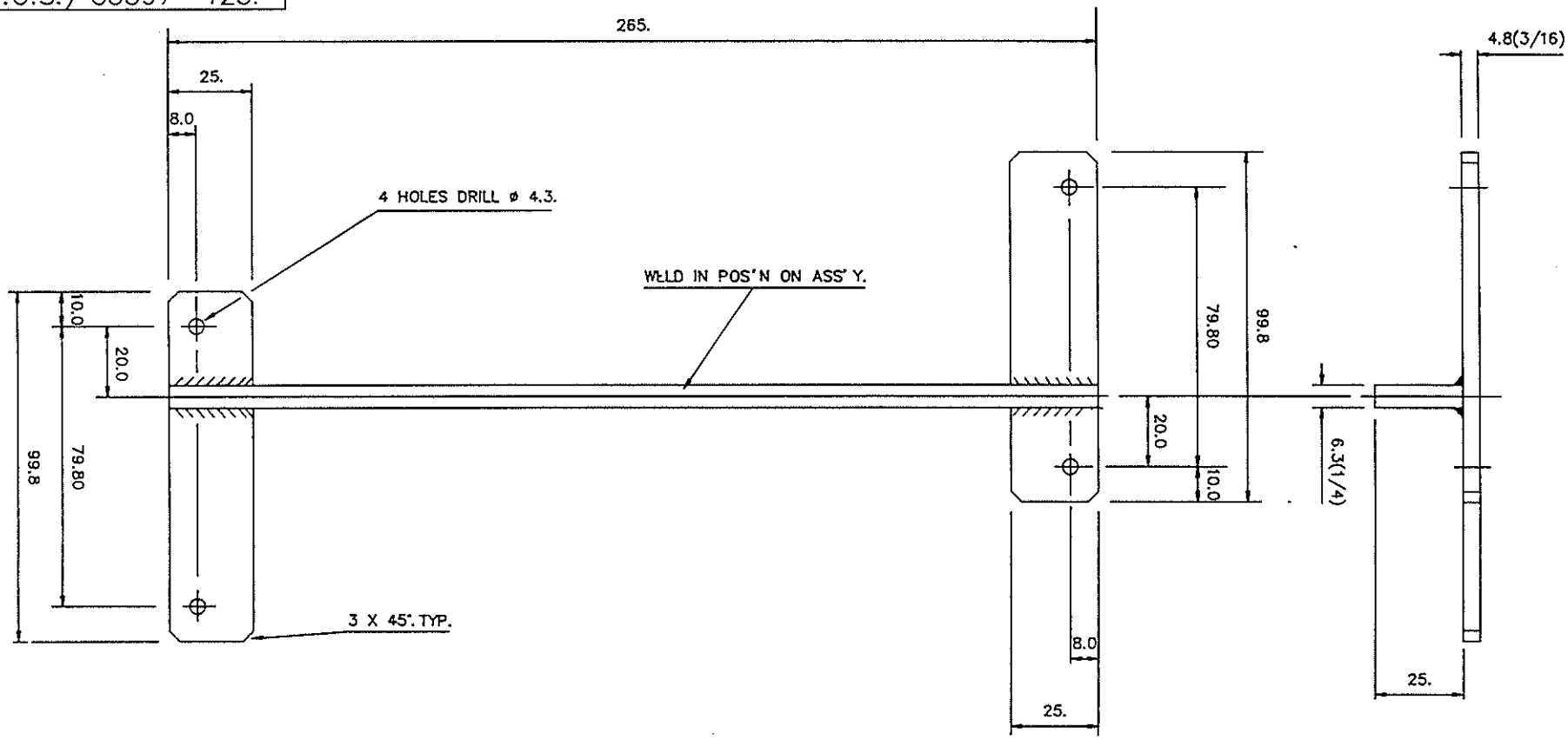
O/No. W/S									
CHECKED	MATERIAL POLYPROPYLENE	PROTECTIVE FINISH NONE.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: ± 1m.m.						
TRACED			.X = ± .4m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
	No.OFF PER UNIT 1.	TOTAL No.OFF	.XX = ± .1m.m.				CERTIFIED	1.	[illegible]
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE 1/1	DO NOT SCALE	INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE B				TITLE HANDLE BLOCK LOCATOR.			DRAWING No. I.O.S./C5597	DETAIL 124.	

DRAWING No.	DETAIL
I.O.S./C5597	125.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



WELD WHERE THUS:-

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

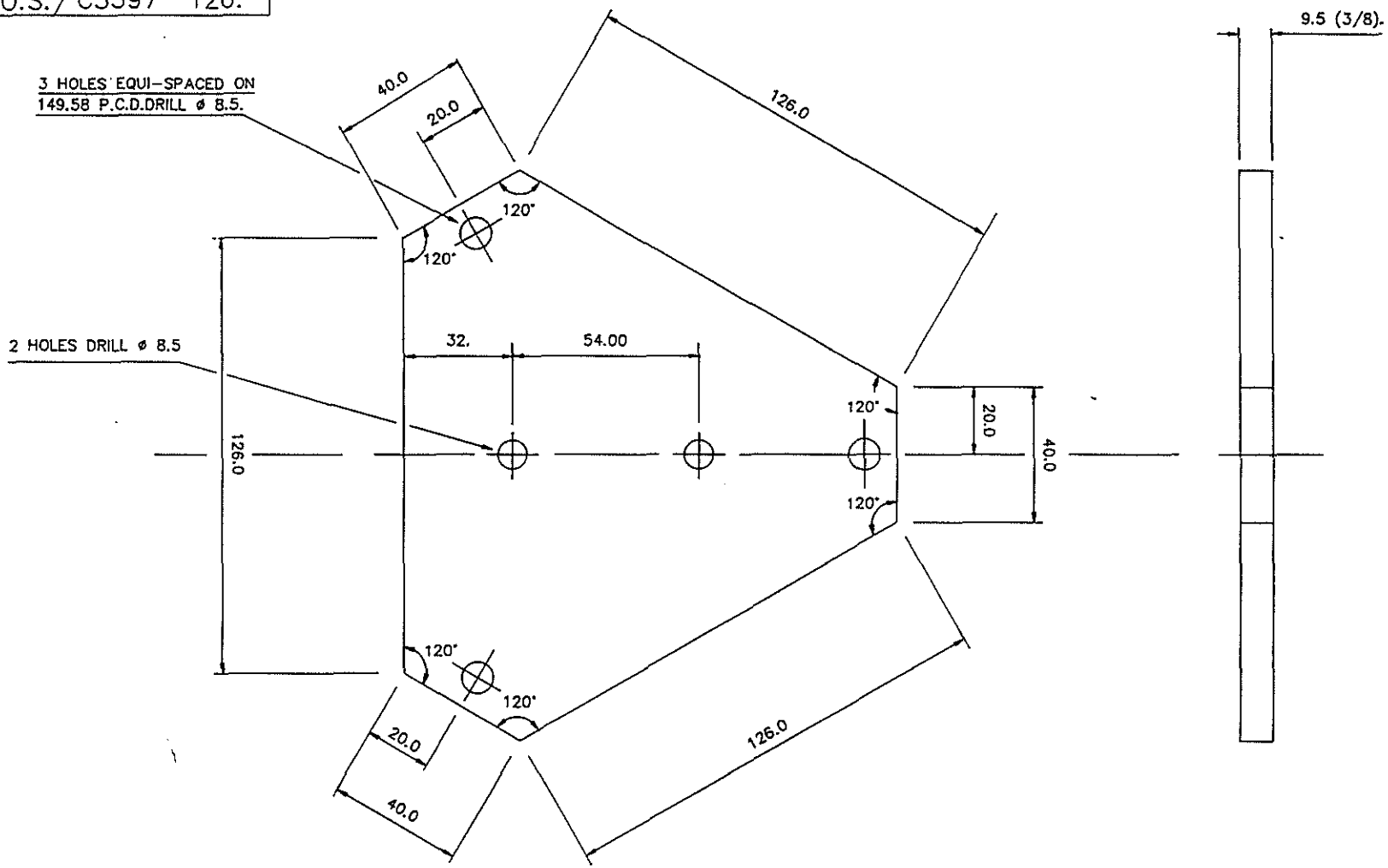
O/No. W/S	MATERIAL POLYTHENE.	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. .X=+/-.4m.m. .XX=1/-.1m.m. DO NOT SCALE					
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED	No.OFF PER UNIT 1.	TOTAL No.OFF					CERTIFIED	1.	9/12/92.
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
SIZE C				TITLE COMPASS RETAINER.			DRAWING No. I.O.S./C5597		DETAIL 125.

DRAWING No. I.O.S./C5597 DETAIL 126.

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S								
CHECKED	MATERIAL POLYPROPYLENE.	PROTECTIVE FINISH NONE.	TOLERANCE EXCEPT WHERE OTHERWISE STATED: +/-1m.m. .X=+/-.4m.m. .XX=+/-.1m.m.	AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE / DATE
TRACED							CERTIFIED	1. 17/12/92
	No.OFF PER UNIT 1.	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES				
DRAWN B.H.	DIMENSIONS IN m.m.	SCALE	DO NOT SCALE	TITLE FLASHING LAMP BASE.			DRAWING No. I.O.S./C5597	DETAIL 126.

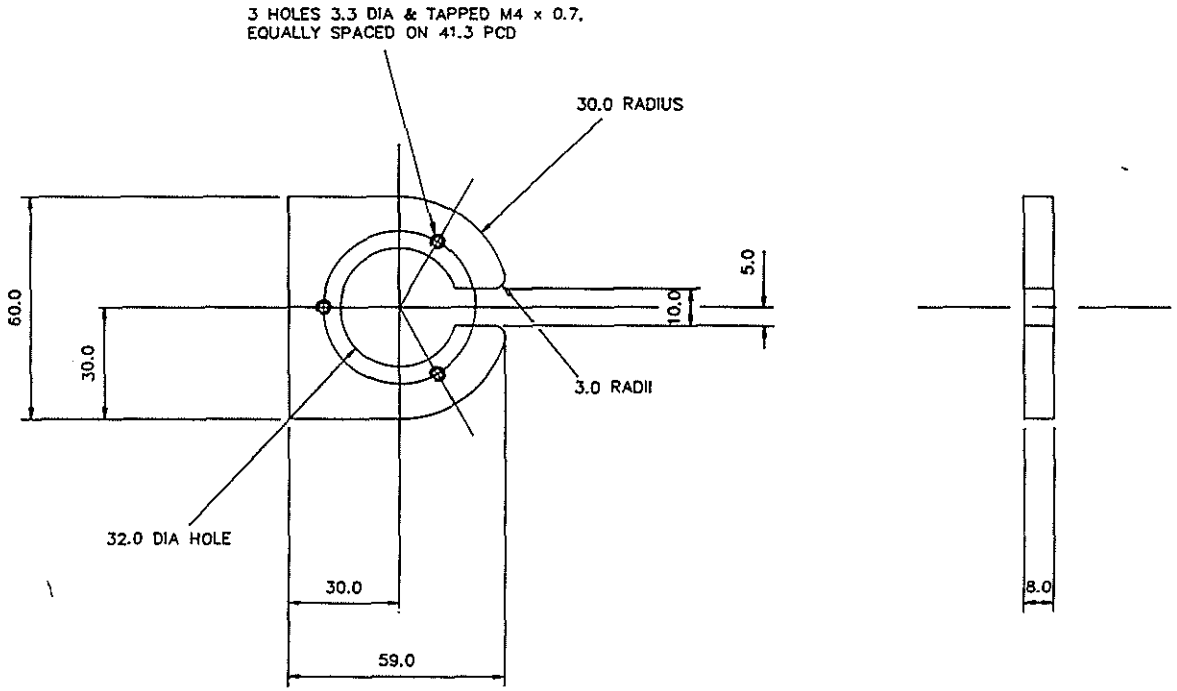
SIZE C

DRAWING No.	DETAIL
I.O.S./ 5597	127

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S

CHECKED

TRACED

DRAWN N.JIMMINS

MATERIAL	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:
ALUMINIUM ALLOY		± 0.4
No.OFF PER UNIT 1	TOTAL No.OFF	
DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE

AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
			CERTIFIED	1	26-1-93

INSTITUTE OF OCEANOGRAPHIC SCIENCES

TITLE	DRAWING No.	DETAIL
AERIAL MOUNTING PLATE	I.O.S./ 5597	127

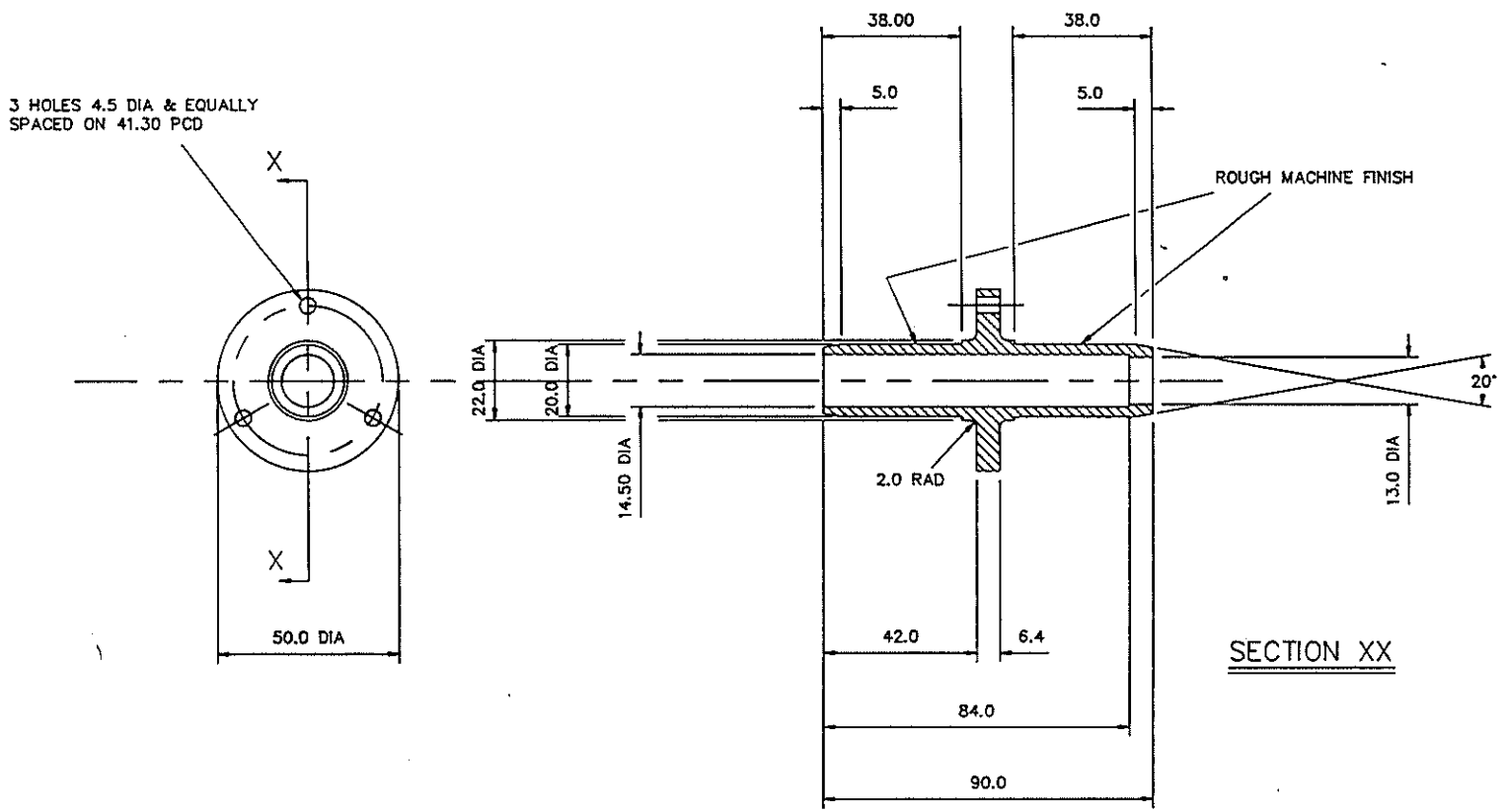
SIZE C

DRAWING No. I.O.S./ 5597 DETAIL 128

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



SECTION XX

REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL NYLATRON GSM	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:						
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED			± 0.1				CERTIFIED	1	28-1-93
DRAWN N.JIMMINS	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE HOUSING FOR AERIAL			DRAWING No. I.O.S./ 5597		DETAIL 128

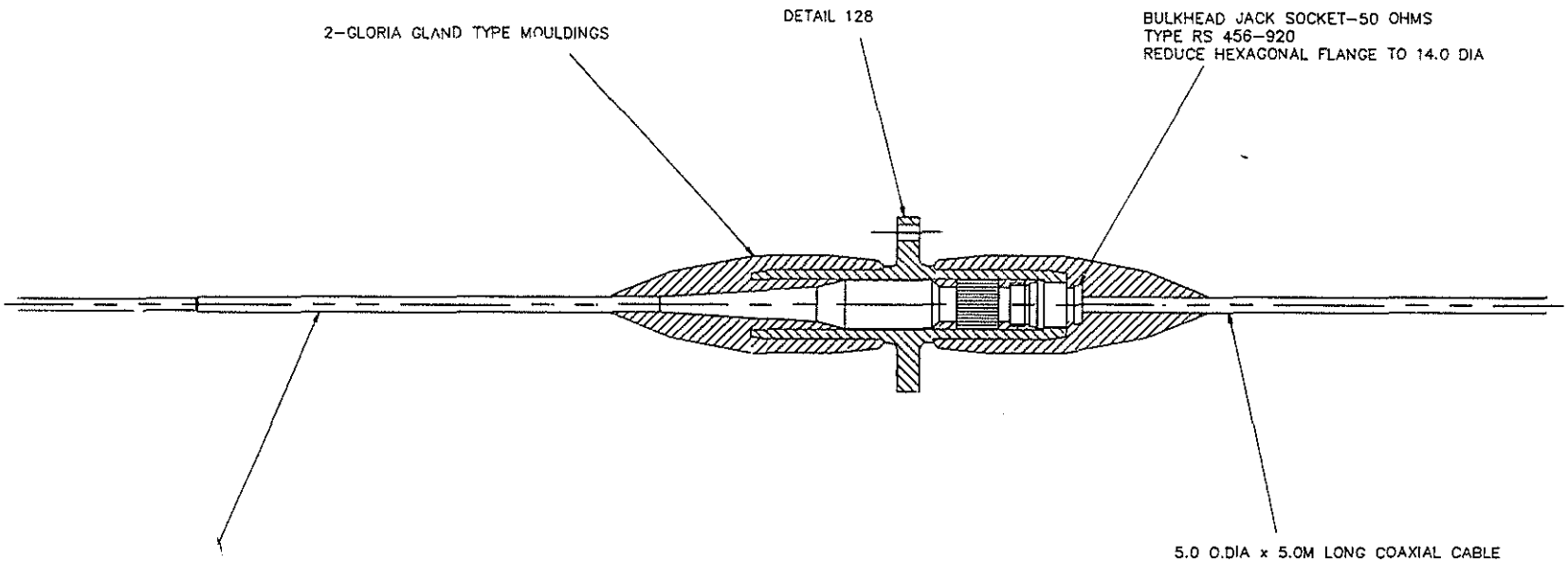
SIZE C

DRAWING No.	DETAIL
I.O.S./ 5597	129

THIRD ANGLE PROJECTION

FOR EXPLANATION OF DIMENSIONS,NOTES,SYMBOLS etc.,SEE B.S.308.

USED ON



REMOVE ALL BURRS AND SHARP EDGES UNLESS STATED OTHERWISE

O/No. W/S	MATERIAL POLYURETHANE SPEC EMC 76	PROTECTIVE FINISH	TOLERANCE EXCEPT WHERE OTHERWISE STATED:						
CHECKED				AMENDMENT	ISSUE	DATE	AMENDMENT	ISSUE	DATE
TRACED							CERTIFIED	1	2-2-93
DRAWN N.JUMMINS	No.OFF PER UNIT 1	TOTAL No.OFF		INSTITUTE OF OCEANOGRAPHIC SCIENCES					
	DIMENSIONS IN m.m.	SCALE 1:1	DO NOT SCALE	TITLE MOULDED AERIAL ASSEMBLY			DRAWING No. I.O.S./ 5597		DETAIL 129

SIZE A3