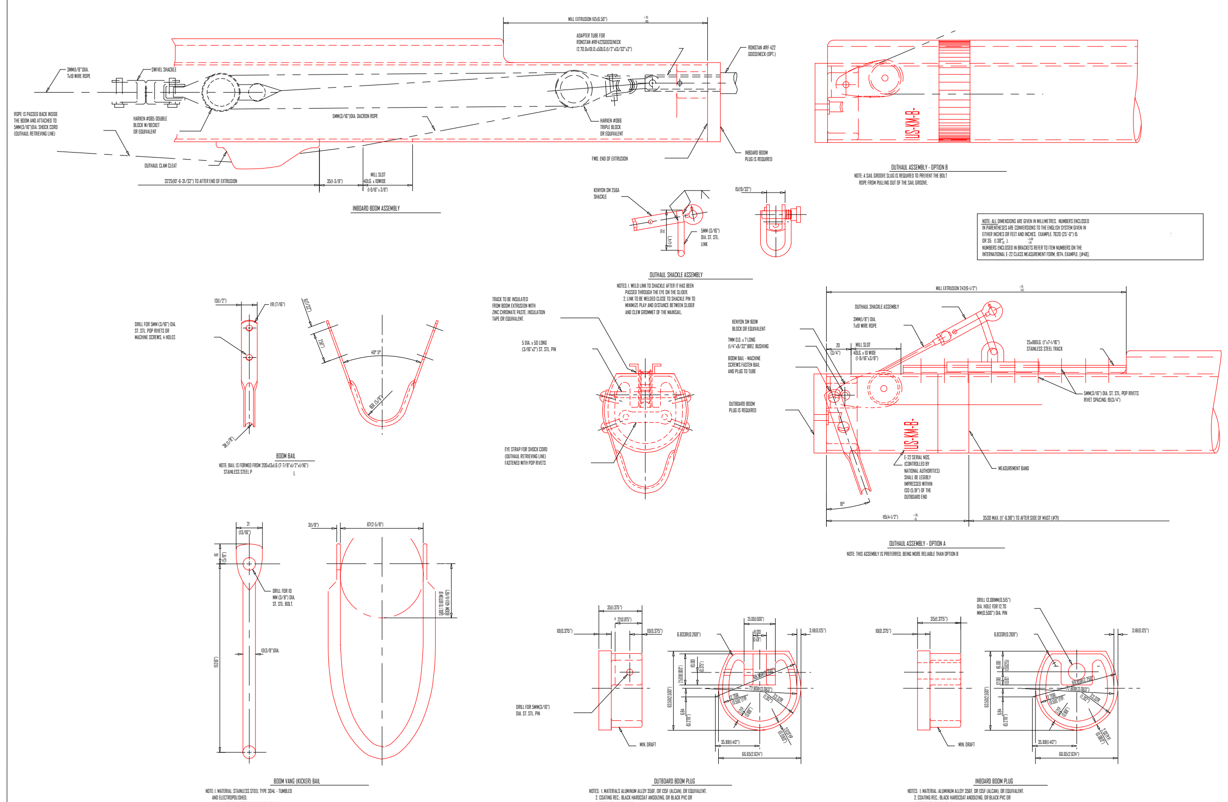

ALTERATIONS

NO.		DATE	D/A
A	1. CHANGED GOOSENECK FITTING TO PERMIT "FIXED" GOOSENECKS AS WELL AS SLIDING GOOSENECKS.	4/7/88	TSL/

NOTES

1. THIS BOOM DETAILS PLAN, 3MKB-25G-SHT.3, IS PREPARED FOR USE BY SPAR BUILDERS OR E-22 OWNERS. DIMENSIONS WITH TOLERANCES INDICATED ARE MANDATORY. THE DETAILED DESIGN OF THE FITTINGS IS OPTIONAL PROVIDED THAT THEY ARE OF THE GENERAL TYPES SHOWN ON THE SPAR PLAN 3MKB-25G-SHT.1. IF OTHER TYPES ARE USED PRIOR WRITTEN APPROVAL IS REQUIRED FROM TH I.Y.R.U. THROUGH THE INTERNATIONAL E-22 CLASS ASSOCIATION. REFER TO SPAR PLAN, 3MKB-25G-SHT.1, FOR ONE-DESIGN MANDATORY MERASUREMENTS, ATTACHMENT POSITION, FITTINGS, ASSEMBLIES AND SYSTEMS. IT IS IMPOSSIBLE TO MENTION EVERY SUGGESTION THAT HAS BEEN RULED ILLEGAL IN THE PAST, AND TO FORESEE EVERY INNOVATION WHICH MAY BE THOUGHT OF IN THE FUTURE. THEREFORE WHEN CONSIDERING ANYTHING IN CONNECTION WITH THE YACHT OR ITS SAILS OR EQUIPMENT WHICH IS NOT CLEARLY COVERED BY THE PLANS, SPECIFICATIONS AND/OR RULES, IT MUST BE ASSUMED ILLEGAL UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM I.Y.R.U. THROUGH THE E-22 INTERNATIONAL ASS'N.

2. MATERIALS: NO EXOTIC MATERIALS SHALL BE INCLUDED IN THE ALLOYS, OR ATTACHED TO, OR USED WITH THE FITTINGS AND SPARS. THE MATERIALS REFERRED TO ON THIS PLAN SHALL BE AS FOLLOWS OR EQUIVALENT:

STAINLESS STEEL, TYPE 304L
NOMINAL COMPOSITION:
18% CHROMIUM, 8% NICKEL, 0.03% MAX. CARBON, 2% MAX. MANGANESE, 1% MAX. SILICON.
TYPICAL PHYSICAL PROPERTIES:
WEIGHT: 8027 KG/M³ (0.29LB/IN³)
MODULUS OF ELASTICITY: 19.95KN/MM² (29,000KPS/IN²)
MECHANICAL PROPERTIES:
ULTIMATE TENSILE: 551,580KN/M² (80KIPS/IN²)
YIELD TENSILE: 206,840KN/M² (30KIPS/IN²)
ELONGATION: 50%
ULTIMATE SHEAR: 310,260 KN/M² (45KIPS/IN²)
ULTIMATE BEARING: 827,370 KN/M² (120KIPS/IN²)
REFER TO SPAR PLANS, 3MKB-25G-SHT.1, FOR 6061-T6 ALUMINUM ALLOY (ESTRUSIONS)PROPERTIES

356 F ALUMINUM ALLOY(CASTINGS):
NOMINAL COMPOSITION:
7% SILICON, 0.3% MAGNESIUM, ALUMINUM & IMPURITIES CONSTITUTE THE REMAINDER.
TYPICAL PHYSICAL PROPERTIES:
WEIGHT: 2685 KG/M³ (0.097LB/IN³)
MODULUS OF ELASTICITY: 72.40 KN/MM² (10,500KPS/IN²)
MINIMUM MECHANICAL PROPERTIES:
ULTIMATE TENSILE: 131,000KN/M² (19KPS/IN²)
ELONGATION: 2%

3. INSULATION: STAINLESS STEEL OR BRONZE FITTINGS ATTACHED TO THE BOOM SHALL BE INSULATED FROM THE ALUMINUM WITH ZINC CHROMATE PASTE, INSULATION ON TAPE OR EQUIVALENT.

4. ALL WELDS ARE CONTINUOUS AND OF USER'S STANDARD PROPORTIONS, UNLESS OTHERWISE NOTED.

5. THE INBOARD AND OUTBOARD BOOM PLUGS ARE MANDATORY FITTINGS.

6. THE BOOM SHALL BE OF CONSTANT SECTION THROUGHOUT AND SHALL NOT BE TAPERED OR CUT AWAY OR DRILLED EXCEPT FOR PROVIDING ENTRY FOR THE MAINSAIL FOOT ROPE AT THE INBOARD AND OUTBOARD ENDS OF THE BOOM (THE AMOUNT OF CUT AWAY IS RESTRICTED AS SHOWN ON THIS DRAWING) AND FOR THE ATTACHMENT OF FITTINGS (RULE 4.2). AN INTERNAL MAINSHEET SYSTEM IS PERMITTED, PROVIDED ALL ENTRY AND EXIT HOLES ARE WITHIN 400MM (15-3/4") THE INBOARD AND OUTBOARD ENDS OF THE BOOM, EXCEPT FOR ONE SINGLE SHEAVE NOT MORE THAN 1800MM (5'- 10-7/8") FROM THE FORWARD EDGE OF THE BOOM MEASUREMENT BAND.

7. REINFORCEMENT SLEEVES ARE PROHIBITED, EXCEPT SLEEVES OF ONE (1) METRE OR LESS MAY BE INSERTED INTO THE BOOM IN THE VICINITY OF A BREAK OR FRACTURE SOLELY FOR THE PURPOSE OF REPAIR AND MAY BE FASTENED MECHANICALLY OR BY WELDING. WELDED REINFORCEMENTS WHICH ARE IN EXCESS OF THOSE REQUIRED TO RESTORE THE LOCAL INTEGRITY OF THE BOOM ARE PROHIBITED.

8. THE TYPES AND SIZES OF THE RUNNING RIGGING ATTACHED TO THE BOOM ARE OPTIONAL.

9. A "FIXED" GOOSENECK WHICH POSITIONS THE BOOM IN A PERMANENTLY FIXED LOCATION OR A SLIDING GOOSENECK MOUNTED ON A TRACK IS PERMITTED.

10. COATINGS: ANODIZING, OR APPLICATION OF A PVC OR ELECTRO-STATIC COATING IS RECOMMENDED FOR THE BOOM. A CLEAR OR ALUMINUM COLOR IS PREFERRED.

ETCHELLS PLANS, SCANNED BY PETER SMITH AT HINKLEY'S SOUTHWEST HARBOR, ME IN 1994, WERE PROOFED AND TRANSFERRED TO DISK BY ERIC GRAVES, CROSS POINT YACHTS, INC. EDGECOMB, ME IN 2001

DESIGNER:
E.W. ETCHELLS
ROUTE 5, BOX 486
EASTON, MD 21601 U.S.A.

CONTROLLING AUTHORITIES:
INTERNATIONAL E-22 CLASS ASSOCATION
BOX 534, WALL STREET STAION
NEW YORK, NY 10268 U.S.A.
INTERNATIONAL YACHT RACING UNION
60 KNIGHTSBRIDGE
LONDON SW1 7JX ENGLAND

INTERNATIONAL E-22 CLASS
DWG. NO. 3MKB-25G3

SPAR PLAN - BOOM DETAILS

SCALE: FULL SIZE
DATE: JAN. 16, 1981 DRAWN/APPROVED: TSL/ CSO SHEET 3 OF 3