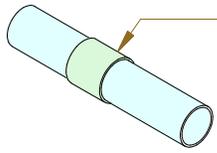


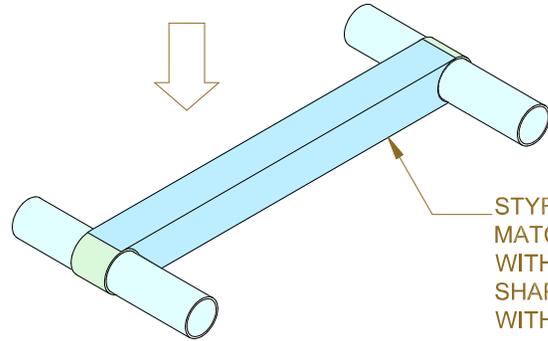
**FABRICATION OF GENERALIZED COMPOSITE RIB**



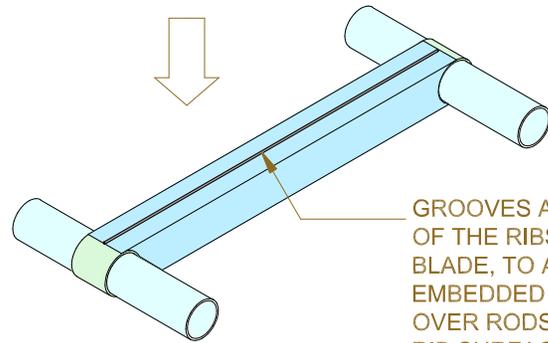
ALUMINUM TUBE SURFACES WHERE RESIN WILL BE APPLIED ARE LIGHTLY SANDED FOR CLEANING & ROUGHENING.



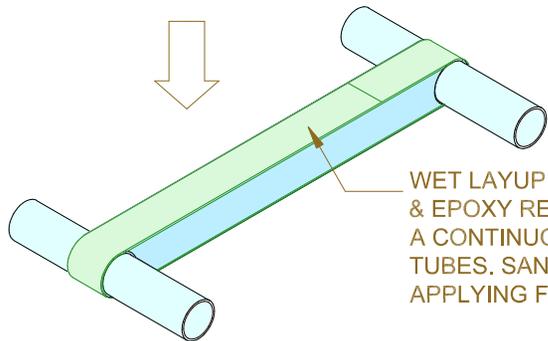
WET LAYUP OF WOVEN FIBERGLASS FABRIC TAPE & EPOXY RESIN IS APPLIED TO PRODUCE CONTINUOUS BANDS AROUND TUBES. LAYUPS MUST BE DONE AT ROOM TEMPERATURE OR WARMER, ELSE RESIN WILL NOT PENETRATE & BONDING WILL BE WEAK.



STYROFOAM RIB 1 INCH WIDE IS CUT TO MATCH THICKNESS OF THE END BANDS WITH A HACKSAW BLADE, SMOOTHED & SHAPED BY SANDING, GLUED TO BANDS WITH EPOXY RESIN.

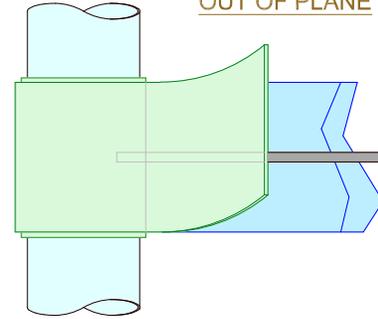


GROOVES ARE SCORED IN THE TOP AND BOTTOM OF THE RIBS, USING A FLAT EDGE SCREWDRIVER BLADE, TO ALLOW CARBON/EPOXY RODS TO BE EMBEDDED IN THE RIB & EPOXIED IN PLACE. FILL OVER RODS WITH MICROSLURRY TO RESTORE RIB SURFACES, SAND AS REQUIRED.



WET LAYUP OF WOVEN FIBERGLASS FABRIC TAPE & EPOXY RESIN IS APPLIED OVERALL TO PRODUCE A CONTINUOUS CAP STRIP AROUND THE RIB AND TUBES. SAND LIGHTLY FOR SMOOTHING BEFORE APPLYING FABRIC.

SAME AREA AS BELOW, VIEW FROM OUT OF PLANE



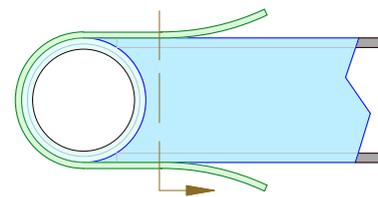
STYROFOAM, BLUE, SMALL CELL, 2 LB./CUFT. 1 IN. THICK,

WOVEN FIBERGLASS FABRIC TAPE, 1 INCH WIDE, 8.7 OZ./SQYD., WET LAYUP WITH EPOXY RESIN

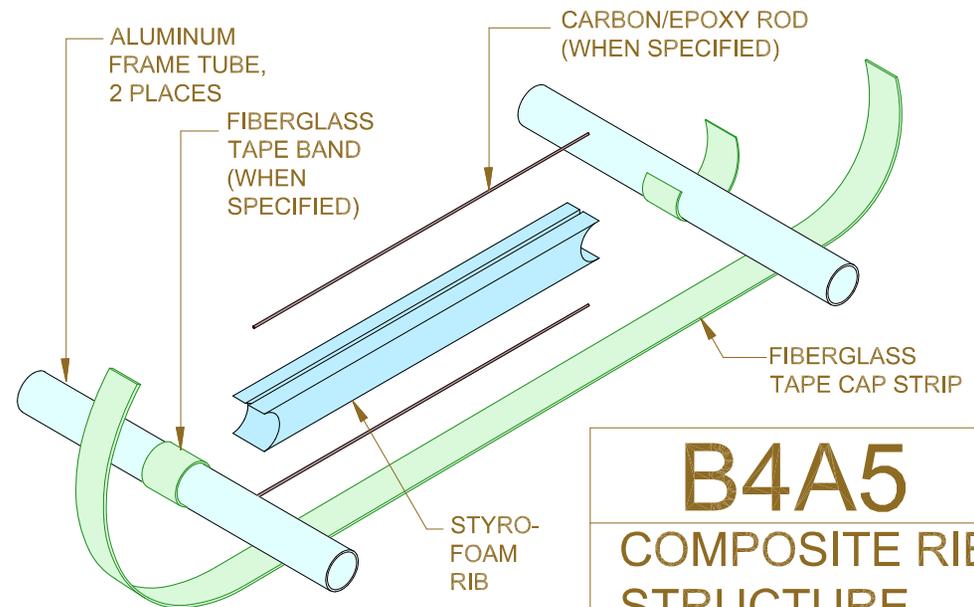
.063 INCH DIAM. CARBON/EPOXY ROD

SECTION A FROM VIEW AT LEFT

SECTION A



GENERALIZED COMPOSITE RIB, VIEW ACROSS TUBE SECTION



ALUMINUM FRAME TUBE, 2 PLACES

CARBON/EPOXY ROD (WHEN SPECIFIED)

FIBERGLASS TAPE BAND (WHEN SPECIFIED)

FIBERGLASS TAPE CAP STRIP

STYROFOAM RIB

EXPLODED ISOMETRIC VIEW OF GENERALIZED COMPOSITE RIB

# B4A5

## COMPOSITE RIB STRUCTURE

BLOOP 4  
ULTRALIGHT  
AIRPLANE

M. SANDLIN  
SEPTEMBER 10  
2021