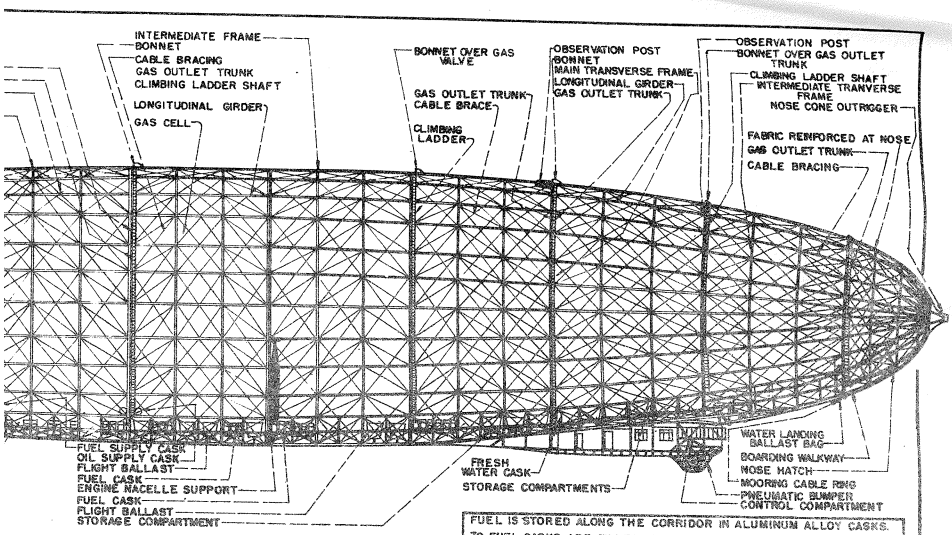
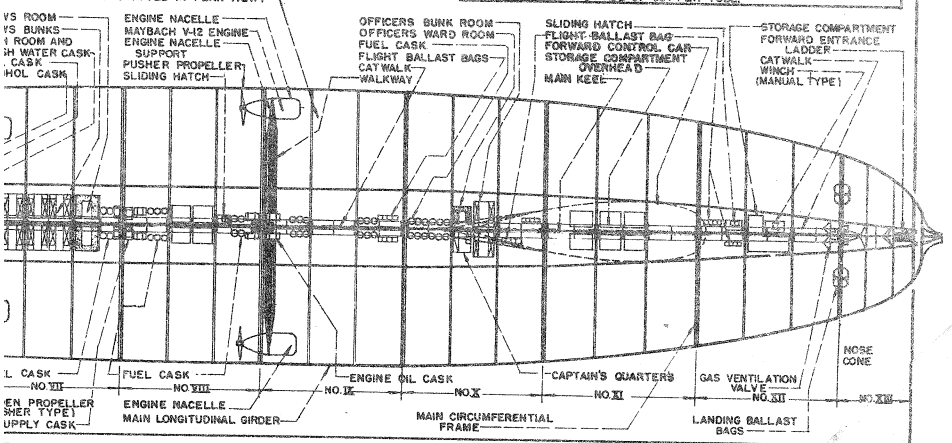


(LONGITUDINAL STARBOARD VIEW WITH OUTER FABRIC REMOVED)

PRIMARY STRUCTURAL MEMBERS CONSISTED OF MAIN TRANSVERSE FRAMES LONGITUDINAL GIRDERS. THE STRUCTURE WAS INDETERMINATE AND HAD TO EVE RIGIDITY BY MEANS OF TENSION CABLE BRACES. THE INTERMEDIATE SVERSE FRAMES FUNCTIONED AS FORMERS TO MAINTAIN THE SHAPE OF AIRSHIP TO AERODYNAMIC FORM. THE STRUCTURAL MEMBERS WERE FABRI- D FROM ALUMINUM ALLOY SHEET, PRESSED TO THE DESIRED SHAPE AND ENED WITH BEADS AND FLANGES. THE JOINTS WERE RIVETED CONSTRUCT- USING SQUEEZE TYPE RIVETS. THIS TYPE STRUCTURE WHILE HAVING A HIGH EE OF REDUNDANCY ALSO EXHIBITED GOOD ELASTICITY AND TORSIONAL ACTERISTICS WHILE FLYING IN TURBULENT AIR CONDITIONS. THE CONCENTRA- WEIGHT ITEMS WERE DISTRIBUTED ALONG THE KEEL STRUCTURE. PRECISE ROL OF DISPOSABLE WEIGHT ITEMS WAS MAINTAINED AT ALL TIMES.

FUEL IS STORED ALONG THE CORRIDOR IN ALUMINUM ALLOY CASKS. 70 FUEL CASKS ARE FILLED FOR MODERATE RANGE WHEREAS FOR LONGE RANGE FLIGHTS, 100 FUEL CASKS ARE INSTALLED. THE FUEL CASKS ARE SUSPENDED ON EITHER SIDE OF WALKWAY BY MEANS OF STEEL WIRE BRIDLES. SOME FUEL CASKS ARE RIGIDLY SUSPENDED, WHEREAS OTHERS CAN BE SHIFTED FORE AND AFT IN GROUPS OF THREE AND ARE ALSO JETTISONABLE IN AN EMERGENCY. ADJACENT TO EACH ENGINE NACELLE THERE IS A CLUSTER OF FUEL CASKS SO PLACED THAT FUEL CAN FLOW BY GRAVITY TO THE ENGINE, REPLEN- ISHMENT OF MAIN FUEL CASKS IS ACCOMPLISHED BY WIND-DRIVEN FUEL PUMPS DRAWING FUEL FROM THE RESERVE FUEL CASKS. ENGINE LUBRICATING OIL IS CARRIED IN FIVE ALUMINUM CYLINDRICAL CASKS OF 111 GALLONS CAPACITY. THESE OIL CASKS IN TURN DRAIN INTO OIL TANKS LOCATED IN EACH ENGINE NACELLES BY GRAVITY. OIL SUPPLY LINES WERE MADE OF ALUMINUM ALLOY WHEREAS FUEL SUPPLY LINES WERE MADE OF COPPER TUBE.

TUDINAL GIRDERS OMITTED IN PLAN VIEW)



.S.S. LOS ANGELES

BY WILLIS L. NYE FOR MODEL AIRPLANE NEWS

SHEET NO. 3

The LOS ANGELES by Willis L. Nye. Built by the Germans as World War 1 reparations,