

JOB DESCRIPTION: Aircraft and Missile Model and Mock-Up Builder

A career in building missile and aircraft mock-ups

Model Builder:

When the aerodynamicists need to run a wind tunnel test, they go to a model builder with the specifications of the aircraft and commission him or her to create a scale model. Not only does the model builder have to recreate the aircraft in detail, but he or she also needs to be able to build into the model the necessary instrumentation for the test data. A strong background in math and science helps the model builder to be a full partner in a successful wind tunnel test sequence.

Mock-up Builder:

While the model builder and the aerodynamicists are working on their small-scale tests, it is often important for a design engineer to work with a full-size mock-up of the aircraft. For example, the designer of the cockpit needs to be able to see the full design to ensure that seats are positioned properly, there is head room for all sizes of pilots, and important switches and instruments are easy to see and reach. In an in-flight emergency, the pilot doesn't have time to fumble about to find the right switch to throw! So the mock-up builder works with the engineers to develop full-scale models of the design. Again, these builders have a solid background in math and science, along with good mechanical skills.

Duties:

Constructs full-scale experimental and production trailer mockups according to specifications, using woodworking and metalworking machines and hand tools: Lays out lines and contours of trailer structures and components on metal, wood, and plastic materials with crayon and scribe, according to engineering drawings, sketches, lofting data, or verbal instructions, using calipers, scales, gauges, and trigonometry to define radius angles and dimensions.



Sets up and operates shop equipment, such as band saw, lathe, planer, jointer, and drill press, to shape parts, according to blueprints. Drills, countersinks, and reams holes in parts and assemblies for bolts and screws, using portable power tools. Aligns and fits parts and assemblies, using transit and sight level. Joins parts together, using bolts, screws, clamps, or glue. Lays out, fits, drills, screws, bolts, and rivets together metal sheeting, upright frames, bottom and top bars, and angle clips, using pneumatic hand tools and templates. Marks and cuts openings in sheeting,

installs support framing around openings, and installs doors, hinges and catches. Fits, drills, bolts, and rivets metal frame pots, headers, and buck plates to make body section, verifying tolerances

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with tri-square and rule. Installs insulating material and electrical wiring. Connects water supply and installs fixtures and appliances. Completes model by installing molding, hardware, and accessories.



Model Building AA Degree Program, under Design and Build:

http://www2.sjcd.edu/program/programs_aeronautical_careers.html

Links to More Information:

<http://library.thinkquest.org/18033/jobs.html>

<http://wings.avkids.com/Careers/build.html>

<http://www.occupationalinfo.org/69/693361014.html>

Courtesy: aviastar.org, wings.avkids.com, Wikipedia (JF-17 Photo)

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