

Historic Engineering expertly restore and conserve military and technical objects. Our extensive knowledge and experience means we can tailor our service to meet all of your conservation requirements: producing high quality, professional work, whatever the subject.

case study large objects and weapons

German WW2 Fi-103 (V1) Flying bomb

customer requirement

This particular example of a Fi-103 flying bomb had been used by the Dutch Army for instructional purposes. It had large sections of the hull cutaway, the engine was split in half, and the nose section was missing. The goal was to re-create an accurate impression of the original V1, retaining as much of the original material as possible.

process and methods used

This project would require both restoration of the original hull, and reproduction of the missing parts. Sheet metal was added to the hull to fill the gaps that were cut out. The reproduction jet engine was built using steel and fibre glass, and a combination of steel tubing and MDF wood painted to simulate the engine grille. The nose section was copied from an original V1 nose, and reproduced in glass fibre. The wings were replicated based on an original set of (late war) wooden wings. The ribs of these wings were CNC machined, to create an easy to assemble frame.

result and findings

The completed V1 has been spray painted in a mix of colours and rough 'camouflage', based on intense study of the rare WW2 images available. The mix of different processes on this object is a good example of what modern production methods can add to reconstructing vintage objects.

images

1. the Fi-103 arriving at our workshop
2. CNC machined ribs forming the wing structure
3. restored hull and completed jet engine
4. the restored V1 on site, ready to be lifted in position

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