

diverse applications




jamesdawson
global hose specialists

Your Partner in Advanced Polymeric Designs and Products

Engineering Collaboration Enhances Performance

Background

BAE Systems, a leading supplier to the Defence & Security Industry, required an operational enhancement to a system fitted to a vehicle deployed in a demanding environment. An initial approach was made to discuss the possibilities.

Action

A team of Engineers from James Dawson visited BAE Systems to review the current system and it was agreed that a design change to a current hose fitted to the vehicle could improve performance and reduce the overall weight. Working alongside the Design Team at BAE Systems, careful consideration was given to the following application requirements:

- **Functional and Environmental Demands.**
- **Maximum and Minimum Operating Temperatures.**
- **Positive and Negative Working Pressures.**
- **Contamination Risks: Oil Vapour, Acids, Alkalines and other Environmental Hazards.**
- **Heat and Flame Resistance Requirements.**

Once the correct criteria had been established, the base materials were selected and tested at James Dawson's in-house laboratory. This was to ensure that the hose would be functionally correct and fit for purpose.

With the material selected and tested, the next step was to design the tool. This was done using James Dawson's in-house tooling capability, incorporating 3D CAD technology. All of James Dawson's tooling is bespoke and designed to each individual customer's specific application and requirements.

Once the tooling was complete the first samples were manufactured, and both the tool and the components subjected to full Production Part Approval Process (PPAP), in accordance with TS16949.

Following PPAP approval by BAE Systems, the samples were ready for a full application test by the customer. This was to ensure that the manufactured hose was correct to drawing, but more importantly, that the hose met all the design criteria specified at the initial review stage. This functionality testing is a very important part of any new hose system design, as it ensures total Customer Satisfaction prior to full production builds.

Summary

The complete process from customer enquiry, through to PPAP approval, took just 6 weeks!

This demonstrates James Dawson's capability as a Global Hose Specialist, and a supply partner who is committed to providing bespoke engineering solutions.

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