

DuPont™ Vespel® CP Grades Offer Lightweight Performance Clamps

Application

The aerospace industry utilizes heavy-duty clamps in applications for hydraulic, electrical, fuel and pressurized air systems. Custom Vespel® Clamp and Bracket assemblies provide an alternative to metal when the application requires a high temperature, high stress solution.

Challenges

- Aircraft engine cases are exposed to temperatures from -54 °C to 343 °C Max
- Clamp strength and fatigue resistance
- Clamps and brackets are typically metallic adding weight to the engine
- Ease of installation and maintenance
- Vibration dampening

Vespel® CP-0301, CP-2010, CP-2020 benefits

Design Flexibility

- Custom Vespel® CP product composition allows for near-net molding of complex geometries

High Strength

- Structural composites provide reinforcing strength >2000lbs /907kg at high temperatures >650 °F/343 °C

Wear Resistance

- Added laminate composite layer maximizes wear performance and eliminates the need for grommets.

Fatigue Durability

- Clamp life over 10 million vibration cycles per AS1974

Light Weighting

- Up to 80% weight savings over metallic options

Vespel® clamps have proven strength and durability in toughest commercial and military applications.

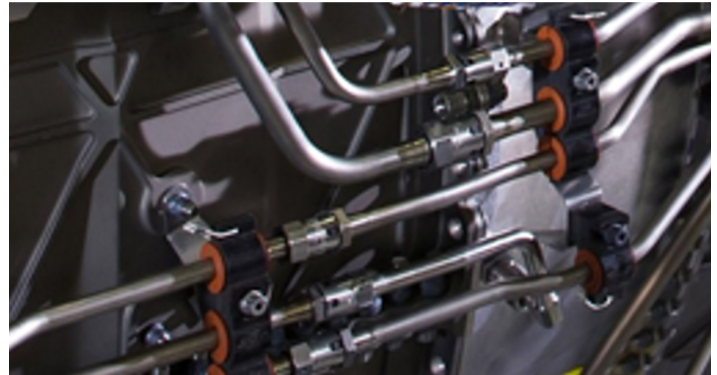
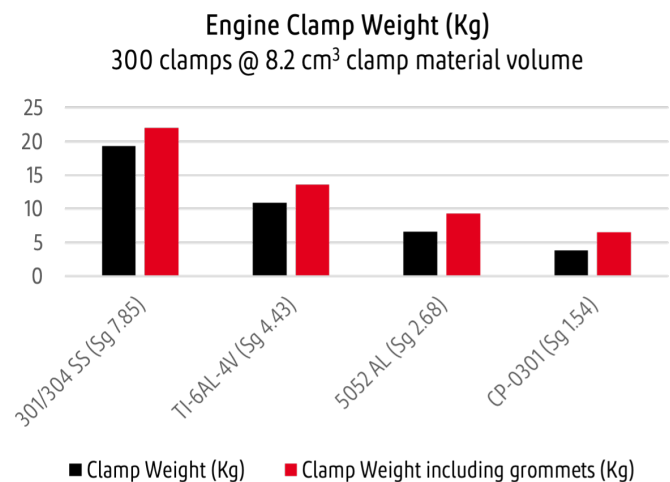


Figure 1. Vespel® composite clamps utilized in jet engine design



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