



Case Study in New Product Development (1)

Requirement

- A PTFE + Carbon disc, over-moulded on to an SS 304 pin
- SS pin to be threaded for further fitment on to OEM equipment

Challenge

- PTFE compression moulding requires uniform pressure, else the part will crack during the heat cycle
- Over-moulding with steel is difficult as the difference in thermal expansion between PTFE and SS means there is a high chance of fracture during the heating or cooling stage of the heat cycle



- Overcame thermal expansion differential by careful analysis of the heat cycle. A specialised heat cycle used to ensure that no cracking occurs
- Over-moulding achieved by studying the dry-flow of the PTFE resin during compression and modifying the structure of the SS pin to allow for a uniform moulding process