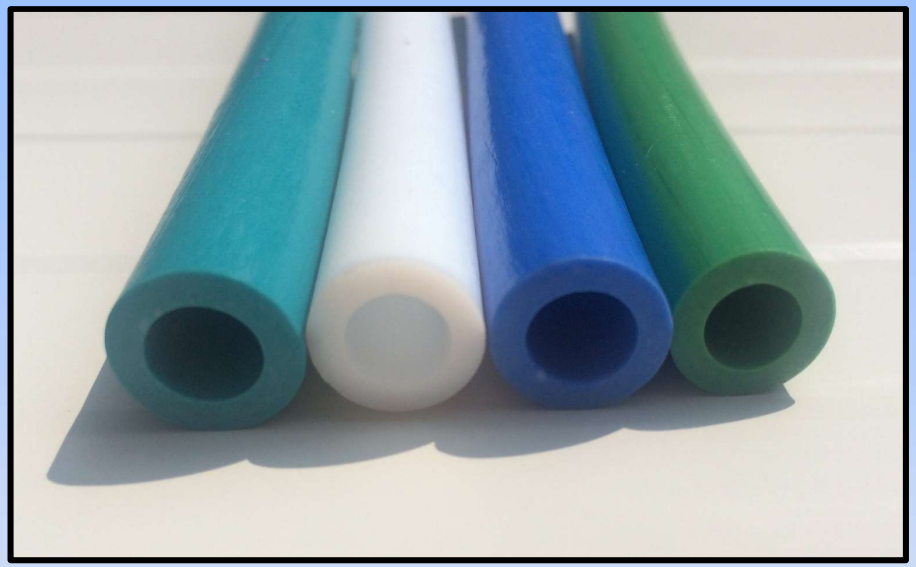
Case Study in New Product Development (2)

Requirement

- A high pressure tube for pantographs capable of both electrical and pneumatic loads
- Tubes to be coloured for identification after installation

Challenge

- Thick walled tubes made via paste extrusion tend to crack/split during the heat cycle
- Most standard liquid pigments either react with the extrusion aid or oxidise during the heat process, turning black
- Any addition of dry pigments does not disperse uniformly and can cause brittleness in the final product



- Successfully developed thick walled (3mm wall thickness) tubes in different colours
- Blending, extrusion and sintering processes were all modified over the standard process to allow for a consistent end-product
- Tubes capable of up to 50 bar pressure with a dielectric breakdown strength of over 100Kv

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