

Composite Gemstones

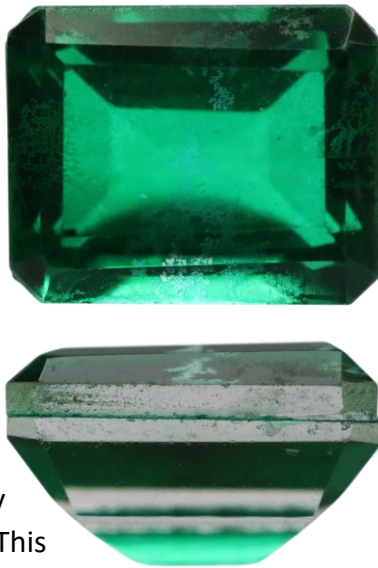
By James Evans, EG

Gem material may be wedded together to increase its size; to enhance its colour, lustre or durability; to introduce optical phenomena or to lower production costs. Some composites seek to please. But for the gems shown below, the intention is all-too-often to deceive!

Soudé Doublet

Soudé doublets consist of a colourless (or weakly coloured) crown and pavilion; held together with a tinted glue that projects a rich colour through the stone.

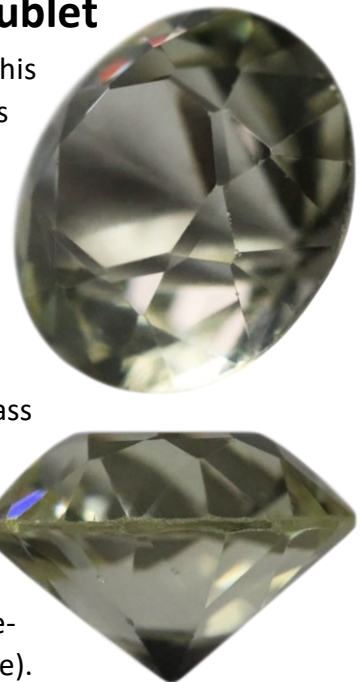
This type of doublet was produced as far back as the 15th century, when it was reportedly invented by a forger named Zocolini. This entrepreneur disguised his gems by setting them in gold – a practice that the trade-guilds had reserved for natural stones. Once set, his creations could only be viewed through the table, requiring very careful examination to observe the join.



Garnet-Topped Doublet

The unusual aspect of this doublet is that no adhesive is involved: the glass bonds to the garnet directly, making a fine join that is difficult to observe. Nevertheless, the stone can be recognised by:

- its differential lustre;
- the greater wear of the glass in contrast to the garnet;
- the colour imparted by the garnet (most readily seen as a red rim when the stone is viewed table-down upon a white surface).

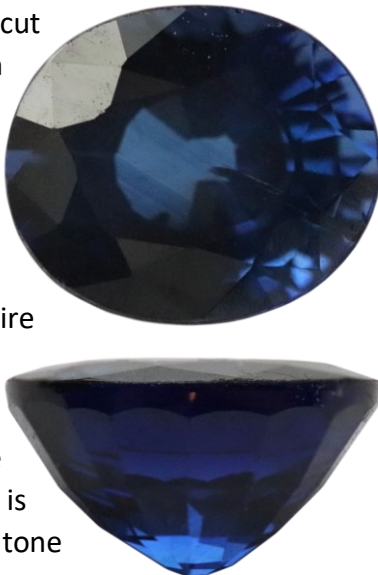


This specimen has an exceptionally thin slice of garnet at its top; imparting only a slight colour to the stone.

Corundum-Corundum Doublet

This doublet has a shallow-cut crown of inexpensive green sapphire – providing the inclusions and straight growth zones typical of natural corundum. The pavilion is composed of a deep-blue created sapphire which overpowers the colour of the crown.

A red doublet would be more convincing, as ruby is often cut to display a richer tone through the table.



Corundum-Glass Doublet

This curious gemstone was purchased in Sri Lanka (at a considerable discount). Its colour is concentrated within a slice of natural sapphire at the stone's base – mimicking one of the country's 'ottu' sapphires. Only, in this case, the majority of the gemstone is composed of glass!

Whilst the doublet benefits from the typical colour-zoning of Sri Lankan sapphire (when viewed from above), its conspicuously flat base calls for further investigation.

