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GOLD AND SILVERSMITHING: INTRODUCTION

STERLING SILVER

Silversmiths in Australia follow the British Standard. This means working with .925 or 92.5% pure. The remaining .075 or 7.5% is composed of other metals such as copper, tin, and zinc. These are added to harden and strengthen the metal. The content of silver must be stamped by the smith to ensure its authenticity.

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Sterling Silver can be purchased in forms of pellets (for casting); rods (for milling or rolling and forging); sheets or plates (for sawing, forging, forming); wire (for forming, drawing or extruding, and forging).

A problem presented when working with sterling silver is fire scale which is a layer of discolouration formed on the surface every time the silver is heated. This discolouration is actually the base metals of the alloy rising to the surface. It must be sanded and polished off before the silver is visible. This can be quite time consuming, especially in crevices. It is important not to heat the silver unnecessarily or at too high a temperature.

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Silver must be annealed before bending, hammering, forming or stretching can take place successfully. Otherwise the metal becomes brittle or work hardened and will easily crack or break. Every time the metal is soldered or annealed it must be immersed in pickle to remove the fire stains which are created by the burning flux and compounds formed in the heat.

When soldering silver and gold both surfaces must be clean and joined. Gaps and spaces will not solder. Concentric pieces must be sprung shut, and other joins must be tied with steel binding wire. Solder is sold as HARD MEDIUM AND EASY. Hard melts at the highest temperature and Easy at the lowest. The first solder

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join is made using hard solder and the second with medium, third with easy. Protect each previous soldering by fluxing them again during the next heating process. Otherwise pit holes or splits can occur. Precious metals (unlike steel or ferrous metal) will not solder or anneal unless the whole object is uniformly heated. Precious metals are excellent conductors of heat and electricity, so you cannot just heat the point of solder alone. Unlike steel, once silver or gold is annealed, it can be cold forged and formed.