AURIDENT, INC.

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WINDSOR CERAMIC GOLD ALLOY TECHNIQUE OUTLINE

Windsor is a high noble ceramic alloy containing, 75.0% Gold; 0.1% Platinum; 12.0% Palladium; 10.1% Silver. Its 75.0% Gold content gives Windsor an attractive light yellow appearance and is compatible with most leading porcelains.

Wax-Up – Sprues should be no smaller than 10 gauge and no longer than 1/4". Minimum thickness of wax should be no less than 0.3 mm.

Investment and Burnout: Use Aurivest investment or equivalent. Carefully follow manufacturer's recommended liquid to powder ratio. To prevent air entrapment in mold during casting, the pattern should be covered by no more than 1/4 inch of investment. Burnout at 1500°F for a minimum of 45 minutes or according to manufacturer's recommended time.

Casting: Centrifugal type casting machine should be wound 3 1/2 to 4 turns. A sufficient amount of metal should be used to leave a button of 8 dwt. At least one third of new metal should be added for each casting using previously used button. No asbestos or flux should be used in crucible. A hot gas-oxygen torch flame should be used but the inner cone of the flame should be at least 1/2 to 3/4 inch long to avoid excessive oxidation during melting. The metal should be heated to approximately 2400°F before casting. At the casting temperature, the metal appears fluid and will vibrate if the casting machine arm is tapped gently.

Cleaning and Finishing: The investment should be removed by sandblasting and/or a chemical reagent. All traces of chemicals should be removed by rinsing in tap water followed by cleaning in distilled water in ultrasonic cleaner. All surfaces to which porcelain is to be applied should be rough ground with an aluminum oxide disc or red stone. **DO NOT USE HEATLESS STONES.** After grinding, metal should be cleaned with distilled water in ultrasonic cleaner.

Degas: Casting should be heated at 1850°F for 2 minutes in air and 2 minutes in vacuum, for a total of 4 minutes (either the air exposure or the vacuum exposure may be done first). Gold coating agents are not essential but if used, it can be applied and fired in place of degassing. After this step, care should be taken to avoid contact with fingers or any object that could contaminate surface. Surface is then ready for application of opaque according to porcelain manufacturer's instructions.

Recommended Solder: YCS