JP-II
HIGH NOBLE YELLOW CERAMIC ALLOY

PROPERTIES

Melting Range	1990° F to 2190°F
Coefficient of Thermal Expansion	
from 25°C to 500°C:	$14.2x10^{-6}C^{-1}$
from 25°C to 600°C:	$14.4x10^{-6}C^{-1}$
Density	18.5 g/cm^3
Grain Size	15 microns
Hardness	155 HV
Tensile Elongation	17%
Tensile Yield Strength (PSI)	50,700
Ultimate Tensile Strength (PSI)	64,200

CHEMISTRY

Gold	87%
Platinum	7%
Palladium	4.5%

Contains less than 1%
Tin, Indium, Iron, Rhenium

Classification - High Noble

PROCESSING TECHNIQUE

WAXING
Wax to a minimum thickness of .3mm for single units and .5mm for bridge work. Avoid sharp angles and corners.

SPRUING
The indirect method is recommended for multi-units. Use an 8 gauge runner bar with 10 gauge connectors. If preferred, the direct method may be used on both single units and small bridges. Use a 10 gauge sprue 1/4" to 3/8" long. Sprues longer than 3/8" should have a reservoir 1/16" from pattern. Patterns should be a maximum of 1/4" (6mm) from top of investment.

INVESTMENT
A phosphate-bonded, high heat investment with or without carbon content is recommended.

BURNOUT
Place in a cold furnace and raise temperature to 1350°F (735°C). Hold at 1350°F (735°C) for one hour. Increase hold time for larger or multiple rings.

MELTING AND CASTING
Extra winds of the casting arm are not required. Use a multi-orifice torch with 10 PSI fuel and 20 PSI oxygen. The alloy will fully puddle and form a ball before it is ready to cast. DO NOT OVERHEAT. DO NOT USE CASTING FLUX. The casting temperature is 2290°F (1255°C).

DEVESTING AND FINISHING
Blast with aluminum oxide to remove investment particles. Finish with diamonds, carbides or aluminum oxide stones. Reblast porcelain receiving surface with non-recycled aluminum oxide. Clean in ultrasonic for 10 minutes in distilled water.

CONDITIONING
Oxidize from 1200°F to 1850°F in air. Hold for 5 minutes. Bench cool. Proceed with normal opaque technique.

SOLDERS AND FLUX

Pre-Solder:	Spirit Solder
Post-Solder:	615 Solder
Flux:	Brown Fluoride Flux for both pre and post soldering