

Bulletin



Praxair Surface Technologies
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Praxair Surface Technologies
TAFE Incorporated
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File: 1.9.2.2CH-1166F
Issue: L11031
Supersedes: J10128

COATING PROPERTIES TAFE 1166F NICKEL

Spray Conditions:

Excellent coatings of TAFE 1166F can be obtained at spray rates from 2 to over 20 lb/hr (0.9 -9.1 kg/hr) with the JP-5000. For typical spray parameters see bulletin 1.9.2.2SH-1166F.

Spray Rate

	10 lb/hr (4.5 kg/hr)	20 lb/hr (9.07 kg/hr)
Coverage	151.4 ft ² /hr/0.001" (0.36 m ² /hr/mm)	289.4 ft ² /hr/0.001" (0.68 m ² /hr/mm)
Powder Required	0.07 lb/ft ² x 0.001" (12.9 kg/m ² x mm)	0.07 lb/ft ² x 0.001" 13.5 kg/m ² x mm)

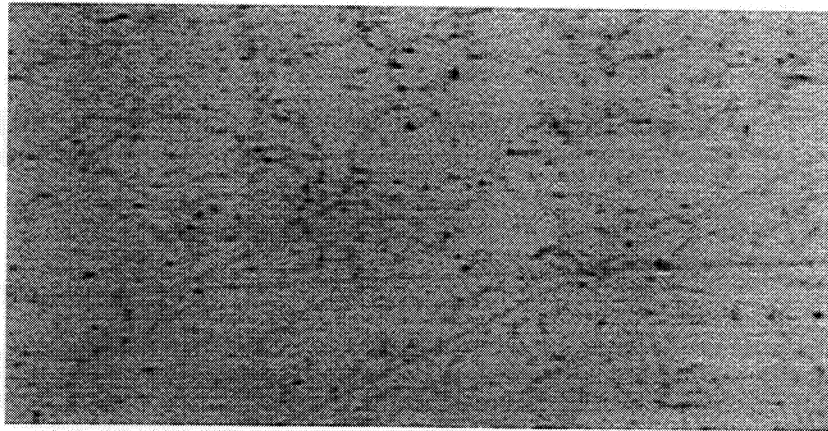
Finishing Procedures:

Coatings of TAFE 1166F are readily machined with carbide tools. Light cuts and high work speeds produce the best finishes. For grinding, the following setup is typical:

Wheel:	60 grit Silicon Carbide/Rough Finish
Wheel Speed:	5500-6500 sfpm
Traverse/pass/rev:	0.080-0.170"
Infeed/pass/rev:	0.0004 - 0.0008"

Coating Properties:

Thickness (maximum)		Over 0.250" (6.4 mm)
Finish -	As Sprayed	175 μ -in AA
	Machined	64 μ -in AA
	Ground	Less than 10 μ -in AA
	Polished	3 μ -in AA
Bond Strength		Over 9,000 psi
Hardness -	Superficial	45 R _{15N}
	Macro	N/A
	Micro	N/A
Microstructure -	Porosity	Less than 1 %
	Oxides	Less than 1 %



Tafa 1166F Nickel Coating Magnification: 200 X
As Sprayed at 20 lb/hr Etchant: None (As Polished)

The information provided herein is believed to be accurate and reliable; however, results may vary with part preparation and operator technique. Tafa is committed to a continuing program of product improvement. Product specifications are subject to change without notice. Tafa warrants only that the powders are free of defects in material and workmanship. No other warranty is expressed or implied.

Hazards:

Observe normal spraying practices. Respiratory and hearing protection is advised. For general guidelines see AWS Publication C2.1-73, and AWS TSS-85. Thermal spraying is a safe process when performed in accordance with proper safety measures.

For further information on HVOF coatings, equipment and supplies, as well as other thermal spray processes and custom automated systems, contact:

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