



# World Class Cleaning Solutions

## Case Study

### Spray Wash Process to Clean Inconel and Titanium Rotating Parts Prior to FPI

#### CUSTOMER DETAILS

**Product:** Jet Engines

**Parts Cleaned:** Rotating Jet Engine Parts

**Removing What Soil(s):** Mostly coolants, lubricants, Zyglo.

**Why are Parts Degreased:** Parts must be cleaned after every operation by a GE approved cleaner to a GE spec.

#### CUSTOMER PROCESS BRULIN REPLACED

**Current Chemistry:** AquaVantage 1990 GD

**Concentration:** Range from 2% to 5%

**Washer Type:** One Kemec, 5 BE, 3 Stoeltings

**Specific Metals:** Inconel, Titanium

**Temperature:** 140°F-150°F (60°C- 65°C)

**Time/Line Speed:** 10 min. wash, 10 minute rinse

**Customer Improvement Requested:** Initially looking for better cleaning pre-FPI Cleaning in Kemac washer. Kemac washer was moved in plant closer to FPI Cell and after Zyglo adhesion was poor. Maintenance checked washer and couldn't find a mechanical issue with washer. Customer tested AquaVantage 3887 GD and zyglo adhesion improved dramatically.

#### BRULIN IMPLEMENTED PROCESS

**Chemistry:** AquaVantage® 3887 GD

**Concentration:** 2-5%

**Temperature:** 140°F (60°C)

**Time/Line Speed:** 10 Min. wash, 10 Minute rinse

**Dry:** 15 Minutes

#### RESULTS

Excellent cleaning and no interference with FPI process.

#### REASON BRULIN WON

Zyglo adhesion improved dramatically