

API-Cecom Group *n'fo*

Technical & Application Note C123

Application: Monitoring Aircraft tire pressure

Type Of company: Airline

Location: Minnesota

Problem: The customer is required to take an “accurate” pressure reading for all on landing gear aircraft tires. The FAA requires that a “cold” tire pressure check be made and logged on every tire every day. They define “cold” as the plane is parked on the tarmac for a minimum of three hours so that the temperature inside the tire is stabilized. The aircraft manufactures have also notified their customers that electronic devices that are used in aircraft hangers must meet the National Electrical Code. According to Section 513.3 of the Code hangers are classified as Class 1, Division 1 or Class 1, Division 2 “Hazardous” locations in which an explosion may occur. The customer requires a digital pressure gauge that is accurate, rugged, FM approved Intrinsically Safe (IS), easy to read and cost effective for a visual indication of the tire pressure. Since an aircraft tire can lose 1 or 2 percent pressure a day it is very important that the readings be taken with a calibrated gauge that will withstand the use and abuse on the tarmac. The pressure had been taken using an analog gauge but the gauge would not maintain calibration while being roughly used on the tarmac. The customer also had a requirement to increase the accuracy of the monitoring gauge so that the inflation pressure would be better maintained on the tires for longer wear and increased tire integrity.

Solution: The customer used a custom DPG2000BBL with an extended temperature range LCD and tarmac ruggedness built in. API was informed by the customer that the gauge was “very tough, durable, and almost bullet-proof”. The customer stated that they increased the gauge calibration interval from 30 days for the old mechanical gauge to 18 months for the Cecom Digital Pressure Gauge. They advised API that with increased accuracy of the pressure readings, they increased the number of take-offs and landings per tire. This resulted in less tire “wear” with proper inflation pressure and increased the safety factor of the landing gear assembly of the aircraft.



DPG2000BBL


Intrinsically Safe Battery Powered
Digital Pressure Gauge



To find your local representative:
www.api-usa.com/api_rep_map.php

Benefits of API's solution:

- ±0.25% Test Gauge Accuracy
- Long Battery Life (up to 2500 Hours)
- “Tarmac proven” durability
- Repeatability of reading
- FM Approved

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