



## WELCOME ROD



We have welcomed Rod Baker to our team of subject-matter experts.

As you know we have a network of highly skilled and knowledgeable experts to support all aspects of our clients' fuel activities. Rod is no exception.

Rod has over 30 years' experience across a wide range of ports and terminals. He understands terminal operations, ship discharge and loading and defensive driving – everything up to B-Double vehicles - better than the rest of us.

Rod is a qualified trainer so trains in all aspects of these activities, and is an extremely good fit with our current activities

## HELPING COMPANIES EXCEL

In the recent months, we've been contacted by a number of companies that need help with training and technical expertise. With the travel restrictions that we are all faced with in this part of the world, this has raised new challenges for us and our clients. Nevertheless, we have risen to the challenge, developed new ways of working to achieve very similar results.

For one customer, we've been able to deliver theory training via our eLearning portal; review and help experienced people within their

organisation understand the competency requirements and equip them to be able to assess field competence of their staff with our remote help.

Another customer needed to perform an audit on a site; but with so many lockdowns and restrictions this was simply not possible. Then a window of opportunity opened. The State opened to people from another State provided they lived outside the capital. We switched resources, arranged permits and travel and work scope and



can now deliver this critical service. The fact that we've had resources in different locations has been an absolute winner for us and our clients.

## THE IMPORTANCE OF CONDUCTIVITY

We were asked the other day why conductivity is such an important measure in Jet fuel, so we thought we'd explain it here.

First, it all has to do with friction. Friction is caused by rubbing one object or material against another. As children, most of us rubbed shoes on nylon carpet before launching an electrostatic spark on some poor unsuspecting person.

The friction is the result of naturally balanced positive and negative electrons separating due to the different materials rubbing against one another leaving the surface of one material with an overall negative charge and the other surface with a net positive charge. Nature wants these charges to return to their normal balanced state so when a negatively charged material comes into close proximity with a balanced or positively charged surface, it will pass its excessive charge off to the other object or collect more positive electrons from the other surface so it can restore its charge to neutral.

Now look at aviation fuels. Both Jet and Avgas are poor conductors (therefore, good accumulators) of electrical charge. Jet is more highly refined, so it's an even poorer conductor than Avgas.

Friction is generated every time fuel is passed through pipelines, through hoses, and especially through pumps where turbulence is created, and filter elements where the fuel is pushed through small pores. The better the conductivity, the quicker any charge will dissipate. This is measured using a Maihak or Emcee conductivity meter.



Jet fuel - being a poorer conductor than Avgas - will generally have an anti-static additive injected into it at refineries and terminals, to help the speed of static dissipation through bonding wires and earthing connections for safer handling.

The JIG standards specify a conductivity reading for Jet fuel. At the wingtip, the minimum requirement is 50 Peco Siemens per metre.

To help small and regional airports avoid having to buy expensive conductivity meters, JIG has set minimum conductivity levels for Jet fuel further up the supply chain that takes into account the expected conductivity losses as the fuel travels through the assets to the airport, and finally to the aircraft.



The minimum conductivity for receipts into terminals should be 150 pS/m. The conductivity



out of terminals and into airport storage facilities is 100 pS/m. Abiding by these measures, it is absolutely reasonable to expect that the conductivity of jet fuel into aircraft will be greater than the minimum 50 pS/m. Where necessary, terminals will dose incoming fuel with Stadis 450 anti-static additive, or add further additive to the

fuel in tank, to provide the fuel with the necessary properties to make it safer to handle.

Note: The term Anti-Static Additive is really a misnomer. It is a static dissipator improver rather than an anti-static additive.

## THE LATEST ON FILTRATION

We have no more to bring you on the recent developments in final Into Plane filtration but are monitoring the situation and developments of both the



Parker-Velcon Water Barrier elements and the Peko-Facet Water Containment elements.

We know that the Peko-Facet elements have been subjected to testing with Boeing oversight and are awaiting the final test and laboratory reports. While we were hopeful of having these last week, their release has been delayed so we will issue a summary of the results via a Technical Bulletin as soon as they are available.