

THE CLARIFIER

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Velcon continues API/IP 1581 5th Edition Testing

Colorado Springs, CO – Velcon Filters, Inc., an industry leader in the fuel filtration market, announced recently that it passed a qualification test to Category M, Type S, of the API/IP Specification 1581, 5th Edition. Representatives from United States Air Force witnessed the testing, which took place on October 7 & 8, 2003.

The tests, which were conducted in Velcon's indoor jet fuel testing lab, consisted of the vessel, R11 Oshkosh, and 15 ea. of Velcon's I-440MM coalescers and SI-542 separators, at flow rates up to 600 gpm. The single-element and full-scale tests were run to the most demanding requirements of the specification (Type S & 3% water).

With completion of this test series, Velcon becomes the first filter manufacturer in the world to qualify to all three categories of the API/IP 1581 5th Edition Specification. The table below shows all of the tests that Velcon has passed to date for the 5th Edition. Recently, Velcon, along with its European affiliate Warner Lewis, Jr. Industrie-Filter GmbH of Germany, were awarded a contract to supply API/IP 1581 5th Edition filter/separator vessels to London's Heathrow Airport for the new fuel facility there.

Velcon's testing program for the 5th Edition will continue well into 2004.

Velcon's Completed API/IP 1581 5th Edition Qualification Tests

Date	Test Vessel	Flow Rate (GPM)	Category, API/IP 1581 5 th Edition	Coalescers	Separators	3 rd Stage
Oct-03	R11 OshKosh	600	M - New & Existing Equipment	15 x I-440MM	15 x SI-542	N/A
Sep-03	VV4256	2500	C - New & Existing Equipment	18 x I-654C5TB	8 x SO-646V5	N/A
Jul-03	HV2856	1000	C - New & Existing Equipment	7 x I-656C5TB	2 x SO-648CM	N/A
Jun-03	HV2856M	1312	C - Existing Equipment	7 x I-656C5TB	2 x SO-648V	N/A
Jun-03	VV2752B	900	C - New & Existing Equipment	7 x I-644C5TB	3 x SO-644V5	N/A
Apr-03	AAE	2000	M - New & Existing Equipment	50 x I-620MM	20 x SO-620C	N/A
Dec-02	HVS2628M 3-Stage	600	M100 - New & Existing Equipment	10 x I-628A4TB	8 x SO-616GS	40 x CDF-215
Nov-02	HV2856	1000	M100 - New & Existing Equipment	7 X I-656A4TB	2 X SO-648CM	N/A

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Mike Gish closes the cover on the 2500 GPM vessel (VV4256) used for September's testing

Velcon Receives API Monogram Certification

In early December, Velcon Filters, Inc., learned it had been granted licenses by the American Petroleum Institute to use its API Monogram on cartridges as follows:

Certificate# 1581-0004 covers cartridges (filters, coalescers and separators) that are qualified to API 1581 Specifications.

Certificate # 1583-0001 covers cartridges (monitors) that are qualified to the API 1583 Specifications.

In order to receive certification, Velcon was required to undergo stringent audits and will be required to show continuous quality monitoring. *Velcon is the first filter manufacturer to receive these licenses.*

To learn more about the details of the Monogram program and process, see the API's website: <http://api-ep.api.org/quality> and click on the lower left side menu "Monogram Program."



Awards, Recognition, and New Faces



Howard Gammon, Chairman and Vice President of Gammon Technical Products, was recently recognized by ASTM for his Four Decades of service to the ASTM and the aviation community. We at Velcon congratulate Howard for this deserved recognition and for his ongoing dedication to excellence.

Mike Gish, (Lab Coordinator), celebrated 30 years with Velcon earlier this year. Mike is known to those of you who have attended any of Velcon's qualification tests, and he is probably the most recognizable Velcon employee due to his appearance in quite a few product photos, such as the one pictured here.



Mike Gish, 30 yrs with Velcon

Dave Taylor, President of Velcon Filters, Inc. recently celebrated his 25th anniversary with Velcon. During those 25 years, Dave and his wife Peggy have lived in Texas, California, Canada, and now in Colorado in various roles with Velcon and Velcon Canada. They have also undertaken numerous globe-trotting adventures visiting customers and distributors, including a trip in early 2003 to Korea, Hong Kong and Singapore, at the height of the SARS epidemic.



Dave Taylor, with a 25 yr gift from Velcon Canada

Velcon is pleased to announce the addition of Dennis Thompson, Sales Manager - Vessels, to our staff. Dennis joined Velcon in December. Dennis comes to Velcon with more than 20 years experience in Liquid Filtration: he has worked in development, field service, design, and the last few years in selling vessels.

Monitor Cartridges Service Life

Since May 2003, there have been a number of important developments in the service life issue. These are summarized as follows.

1. A task force has been formed by API/IP to investigate the performance of water absorbing cartridges. The task force includes members of the oil industry, filter manufacturers, airlines and fixed base operators (FBO's).
2. Analytical work conducted by Velcon Filters, Inc. indicates the presence of sodium chloride (salt) on the water absorbing polymers and that this salt can degrade the performance of these water absorbing polymers. At this stage it is not clear as to how the salt is getting into the fuel system – further tests and analysis are being conducted.
3. Tests on six (6) inch cartridges also show, at some locations, that the performance of cartridges in service for over one year exhibit a similar degradation in performance to the two (2) inch monitors. Again, all poorly performing cartridges show a presence of salt on the water absorbing polymers. It should be understood that the Velcon cartridges that did not meet the specification have all shown a high pressure differential (in excess of 25 psid) during our testing.
4. Although we believe that salt is a major factor, we continue to investigate other factors as well.

RECOMMENDATIONS – SERVICE LIFE

As recent test data indicates that six (6) inch cartridges can be affected, Velcon Filters, Inc. recommends the following:

Service life for all water absorbing cartridges, including two (2), five (5) and six (6) inch diameter cartridges, should be one (1) year, unless stated otherwise by your company's fuel handling procedures.

Velcon Filters will continue to work with companies and operators who wish to extend service life for three month intervals beyond one year, by testing cartridges that have been in service for one year or longer. Please contact Velcon Filters, Inc., at vfsales@velcon.com or fax us at 719-531-5690, if you wish to participate in this program.

We also recommend that all operators continue to diligently conduct water removal procedures as outlined in our service bulletin of May 22, 2003. Please see our web site, <http://www.velcon.com/doc/vol2no3.pdf> for this bulletin. Please also check our web site, www.velcon.com, on the "What's New" page, for all the latest information on this important issue.

SwIFTKit® Info

In our last edition of the Clarifier, Vol. 14 No. 2, we discussed clay cartridge changeout - specifically when and how changeout should occur. Velcon has a product, the *SwIFTKit*, which helps take the guesswork out of the process.



The *SwIFTKit* is a practical device that determines the Interfacial Tension (IFT) of aviation jet fuel in the field. By comparing the upstream and downstream IFT values of jet fuel, you can determine whether the clay treatment is still effective. Higher IFT values indicate low surfactant levels, therefore IFT should increase after clay treatment. For more information on this patented tool, please see www.velcon.com, data sheet # 1759, or check with your local distributor. To order ask for Part Number "SWK1." On our web site, www.velcon.com/clarify.html, the following Clarifiers contain related information: 2003 August, page 2, 2002 April, page 3, 2000 March, page 2, and 1996-1998 Online Collection, page 4.

Contact Velcon Filters, Inc. at 800-531-0180 or vfsales@velcon.com for further details.

CDF[®]/Aquacon[®] Maintenance Tips

CDF & *Aquacon* monitor elements are the most reliable water stopping devices that we know of. However, they are not indestructible and do require a minimal amount of care and maintenance:

1. **Drain Sumps Daily** in accordance with our instructions. Prolonged submersion in water can destroy the element's ability to stop water transmission.
2. **Do not reuse dried elements** that have previously gotten wet. When water saturated media is dried it may shrink and crack, leading to possible internal bypass.
3. **Replace elements after 1 year of service.** (See previous article.) The shutdown performance may deteriorate somewhat after that time, particularly in the case of water slugs at low flow rate.

All of these points are covered in our current installation instructions, but you should review them with your CDF element customers.

Velcon Service Awards

Several of Velcon's employees have recently or will soon earn their service awards:

25 Years of Service ~

Dave Taylor
Tomas Gutierrez (Texas)
Carlos Villarreal (Texas)

5 Years ~

Bob Harrington
Bernie Pittman

See You In Las Vegas!

AVIATION
INDUSTRY WEEK



May 18-20, 2004
Las Vegas Convention Center
Las Vegas, Nevada

Velcon Filters will be exhibiting at Aviation Industry Week (AS3/GSE) in May in Las Vegas. We will be in the Booth 4033. We hope to see you there!

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We also welcome your comments and suggestions on topics covered in *The Clarifier*.