Date: Mon, 21 May 2012 10:58:44 +0200

From: kslee0421 <kslee0421@korea.ac.kr>

To: Ian.Crotty@cern.ch

Subject: Leak test

Parts/Attachments:

1 Shown 34 lines Text (charset: EUC-KR)

2 84 KB Application

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Dear Ian,

Â

I'd like ask your opinion for leak test. Today we have test a gap with two

different way.

First way is connecting one end of the gas gap to water column to adapt the

Variation

of atmosphric pressure P0. The other way is just all the gas pipes except

the one to

the pressure sensor.

Â

1. First method is free from the variation of P0 but more should be

sensitive to the temperature

Â Â Â variation due to the long cable length.

2. Second method is not free from the variation of P0 because of the

isolation of air. But it

Â Â Â will be less sensitive to temperature due to the short cable length. Â

Which do you think is more relevant ?Â Â Please look the figure attached.

We have testedÂ two timesÂ the gap withÂ the first methodÂ and compared with

second one.

I though the first method should beÂ more accurateÂ than the second one

because of the variation

of P0Â is cancelled. ButÂ I heard the engineer did all the leak test with the

sencond method. Â

But IÂ don't notÂ seeÂ anyÂ consistent result sayÂ that one is better than the

other.

y = -0.0001x + 20.08. -> the leak rate was measuredÂ every second. So, the

solpe 0.0001 is

equivalent to 1.0 x E-7 in the slope parameter in theÂ database. The

acceptance limitÂ for RE4/2

TWÂ isÂ 2.5 x E-7. Â

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We reduced the weight loading on spacers from 2 kg to 1 kg. Then the

problems were solved.

1. The maximum heigh of peak on glued spacers is at best 0.2 hPa.Â Â Â Â Â Â

2. IÂ do not see any negative peak.Â The negative peaks could be induced due

to theÂ movement

Â Â Â of gas gapÂ (oscillation) during pushing the spacers withÂ large weight.

3.Â The peak height on the glued spacer lyingÂ just next to the pop spacer

wasÂ higher than the other

Â Â  normal spacers, but were still bess than 0.5 hPa. Â Â

4. The peak height on the pop spacer has been also reduced to ~ 1 hPa, but

was obviously much

Â Â  higher than 0.5 hPa.Â Â

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With Best Regards,

Kyongsei Â Â Â

[PutAck.jsp?ack\_args=c2VudF9maWxlPWtzbGVlMDQyMUBrb3JlYS5hYy5rci8uU2VudC8xMzM3NTkwNzI0OTkyLjQwMzA0LmtvcmVhJ

nNlbmRfZGF0ZT0yMDEyMDUyMTE3NTg0NCZzdWJqZWN0PUxlYWsgdGVzdA==&to\_email=Ian.Crotty@cern.ch\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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[ Part 2, Application/OCTET-STREAM (Name: "=?EUC-KR?B?bGVha190ZXN0LkpQRw==?=") 84 KB. ]

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