



Ryan Swaine <viamed.ryan.swaine@gmail.com>

RE: Using O2 sensors in N2O

1 message

Zhenhe Sun <Zhenhe.Sun@teledyne.com>

5 June 2014 17:18

To: "Ryan Swaine (ryan.swaine@viamed.co.uk)" <ryan.swaine@viamed.co.uk>

Cc: Steve Broy <Steve.Broy@teledyne.com>, Mike A Gonzalez <Mike.Gonzalez@teledyne.com>

Ryan,

Mike forward your message to me concerning sensor in N2O.

Teledyne has a series of R sensor, such R17med, R22med, R15, R24 etc medical sensors. Some of them are used in N2O background. There is no long term adverse abnormal effects reported. The short term effect of N2O is that it can dissolve into the electrolyte and de-composite into N2 that will increase internal pressure of the sensor. that why R series medical sensor has a different expansion membrane that can quickly release internal pressure. Those sensor also has an enforced front clamp that tightly hold sensing membrane in place. So, if the sensor is used in N2O background, be sure to use medical sensors.

Regards!

Zhenhe

From: Mike A Gonzalez
Sent: Thursday, June 05, 2014 7:19 AM
To: Steve Broy; Zhenhe Sun
Subject: FW: Using O2 sensors in N2O

FYI...

From: viamed.ryan.swaine@gmail.com [mailto:viamed.ryan.swaine@gmail.com] **On Behalf Of** Ryan Swaine
Sent: Thursday, June 05, 2014 7:09 AM
To: Mike A Gonzalez
Subject: Using O2 sensors in N2O

Dear Mike

I hope you are well.

I hope you can help me, as I have a potential customer who is wanting to use an R-17/R-22 style sensor in a gas of approximately 50% O2 / 50% N2O.

I have a copy of "Teledyne Analytical Instruments Medical Oxygen Sensor Family Performance Report July 5, 2000" that was prepared by yourself and colleagues. After reading the report, I was left with the understanding that the sensors will still operate within 2% accuracy with gas mixtures of up to 70% N2O. What I would also like to know is if you know of any long term adverse effects from using these sensors in N2O, such as premature failures?

I look forward to your reply.

Best regards

Ryan

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