



**CRYOMAGNETICS, INC.**

1006 Alvin Weinberg Drive, Oak Ridge, Tennessee 37830

## Non-Conformance Report

<b>Vendor Name: Cryomagnetics, Inc.</b>	<b>Date: 2-25-09</b>
<b>Vendor Contact: Tony Leach</b>	<b>Phone #: 865-482-9551 X113</b>
<b>Email: tleach@cryomagnetics.com</b>	<b>Fax: 865-483-1253</b>

<b>Item: HINS Front End RT Solenoid Cryostat He-Vessel Post Mounting Block (Magnet #s 1205 &amp; 1206 –This Shipment) (Magnet #s 1107 &amp; 1108-Next Shipment)</b>	<b>Part# 5520.000-ME-441942</b>
---	---------------------------------

<b>Quantity: 4</b>
<b>Work Order #: 5361</b>
<b>RMA# (If needed): NA</b>

### **Description of Non-Conformance:**

We realized during QC that the parts had moved during the first milling operation in the fixture. The sides of the 63.5 (2.5) dimension were not in proper rotation with the bolt circle.

### **Corrective Action:**

Re-fixtured the parts and indicated bolt hole rotation to proper alignment. Took minimum cut off each side of the 63.5 (2.5) dimension to correct problem. This left (3) parts at 61.98 (2.440) and the last part at 61.6 (2.425).

<b>Engineering Approval:</b>	<b>Date:</b>
<b>Manufacturing Approval: Tony Leach</b>	<b>Date: 2-25-09</b>
<b>Repair Accepted By: Fermilab personnel (per e-mail)</b>	
<b>Date: 13-Feb-2009</b>	

Drawing number 441942.txt

Subject:  
RE: Drawing number 441942  
From:  
Tony Leach <tleach@cryomagnetics.com>  
Date:  
Fri, 13 Feb 2009 11:24:14 -0500  
To:  
'Jamie Blowers' <blowers@fnal.gov>  
CC:  
'Earle Burkhardt' <earle@cryomagnetics.com>, 'Tom Page' <tpage@fnal.gov>, rone@fnal.gov

Hi Jamie,

I will get NCRs out to you early next week. Thanks!

Best Regards,

-Tony

Tony Leach  
Production Manager  
Cryomagnetics, Inc.  
1006 Alvin Weinberg Drive  
Oak Ridge, TN 37830  
Phone: (865) 482-9551 Ext. 113  
Fax: (865) 483-1253  
E-mail: tleach@cryomagnetics.com  
Web: www.cryomagnetics.com

-----Original Message-----

From: Jamie Blowers [mailto:blowers@fnal.gov]  
Sent: Friday, February 13, 2009 11:13 AM  
To: Earle Burkhardt; Tony Leach  
Cc: Tom Page; Evans Ron  
Subject: Re: Drawing number 441942

I agree with Tom's assessment. This should be documented in an NCR. We'll also need to know which solenoids these four parts end up in so they can be flagged at incoming inspection here and traced back to the NCR.

Regards,

Jamie

----- Original Message -----

Subject: Re: Drawing number 441942  
From: Tom Page <tpage@fnal.gov>  
To: Earle Burkhardt <earle@cryomagnetics.com>  
Date: 2/13/2009 9:58 AM

> > 2.44" width will be OK.

> >

> > This needs to be documented through a Discrepancy Report. Please follow up with Jamie. If this is not done, these parts will not be accepted at inspection.

> >

> > Thanks.

> >

> > -Tom

> >

> >

> > Earle Burkhardt wrote:

>> >> Tom,

>> >>

>> >> I've attached a marked-up top-view of the drawing. The added lines  
>> >> show how the part was machined. I've exaggerated the angle in the  
>> >> drawing.

>> >>

>> >> The cope is aligned properly with the holes. The angle of the sides  
>> >> is the only part that is mis-aligned. If we straighten the sides up,  
>> >> the total width of the cope will be 2.44" instead of 2.50".

>> >>

>> >> Best regards,

>> >> Earle

>> >>

>> >> --

>> >> Earle Burkhardt, Ph.D.

>> >> earle@cryomagnetics.com

>> >>

>> >> Cryomagnetics, Inc.

>> >> 1006 Alvin Weinberg Dr.

>> >> Oak Ridge, TN 37830

>> >> USA

>> >>

>> >> Phone: +1 (865) 482-9551 ext. 104

>> >> Fax: +1 (865) 483-1253

>> >>

>> >>

>> >>

>> >> Tom Page wrote:

>>> >>> Earle,

>>> >>>

>>> >>> I can't picture how the holes are off. Could you please send a  
>>> >>> marked up drawing or picture? Also, this type of request needs to  
>>> >>> go through Jamie Blowers and copy Ron Evans.

>>> >>>

>>> >>> Thanks.

>>> >>>

>>> >>> -Tom

>>> >>>

>>> >>>

>>> >>> Earle Burkhardt wrote:

>>>> >>>> Hi Tom,

>>>> >>>>

>>>> >>>> Our machine shop has four He Vessel Post Mounting Blocks made  
>>>> >>>> (drawing number 441942). The fixture moved during the machining,  
>>>> >>>> and the eight screw holes are rotated about 0.060" (~1.45 degrees)  
>>>> >>>> relative to the raised area. Would it be ok if we drilled these  
>>>> >>>> holes out bigger at the correct angle and put helicoils in them?  
>>>> >>>> Another possibility would be to make the raised area narrower and  
>>>> >>>> straighten it up, but the raised area would end up about 0.060"  
>>>> >>>> narrower than the drawing calls for.

>>>> >>>>

>>>> >>>> Please let me know if either of these sounds acceptable to you.

>>>> >>>> Best regards,

>>>> >>>> Earle

>>>> >>>>

>>>> >>>> --

>>>> >>>> Earle Burkhardt, Ph.D.

>>>> >>>> earle@cryomagnetics.com

>>>> >>>>

>>>> >>>> Cryomagnetics, Inc.

>>>> >>>> 1006 Alvin Weinberg Dr.

>>>> >>>> Oak Ridge, TN 37830

Drawing number 441942.txt

>>>> >>>> USA  
>>>> >>>>  
>>>> >>>> Phone: +1 (865) 482-9551 ext. 104  
>>>> >>>> Fax: +1 (865) 483-1253  
>>>> >>>>  
>>> >>>  
> >

