WBS Number: 12 WBS Title: Vacuum Vessel Systems Job Number: 1204 Job Title: Vacuum Vessel System Procurements Job Manager: Larry Dudek

### M&S Backup

Heater Tape

# Brisk-leat,

onfi	der	ntial Quotation	n Form		1	055 985and Are Solambur, OH 43201 Those 000-046-7870 Fax: 014-294-2072 mp://www.bridile.d.com/
Custom Address	s: }	Princeton Plasma Physics Lal Head, FOM Division	b Date:	ition No.: red By:	5/9/2007 Susan Bla	ink
	5	PO Box 451 Princeton, NJ 08543 PO Box 451	Delive	ent Terms: ry: Valid:	Terms Ne See Belov Sixty (60)	Y
Contact	t: F	P.E. Lawrence E. Dudek	F. 0.1		Columbus	
hone:		09-243-2185		nt Charge	Collect	
Fax		09-243-3248				ountnumber
mail: teferen		dudek@ppl.gov	Total	Pages	2	
tem	Qty	Produc	t Description	1	Init Price	Net Price
1	200	Custom Bill Style Heatin			\$68.25	\$13,650,00
		Heavy Insulated Heating T To be constructed with allo 22% Ni with a balance of 0 24" Leads Same End, With	by 180. This alloy consist Cu and it is non-magnetic In Split Plug, 120 Volt		1	
2	48	Custom BIH Style Heatin Heavy Insulated Heating T To be constructed with allo 22% Ni with a balance of C 24* Leads Same End, With	ape, 310 Total Watts, by 180. This alloy consist cu and it is non-magnetic.		\$44.25	\$2,124.00
			TOTAL	: /		\$15,774.00
orice. .ead-t The le ead-ti	Price time si ad-tim me is:	ded a 25% quantity discou quoted does not include sh nce the tape will be custon be begins upon receipt of co subject to change based or time when placing the ord-	nt off of our manufactur hipping cost. h-made is 3 to 5 weeks amplete information to n order volume and ava	ed list price at the mos	t. manufactu	ove quoted
		he assigned quote number	/	er.		
Please	e do ni	ot hesitate to call with any o	que stions regarding this	s quotation		
Sincer			1			
Susa	n Bla	me.	· · · ·			
		presentative	Assumed ~\$7	0 x 220	(based	on current
Phone	: 800- 514/29	Products (BH Thermal) -848-7673 ext 156 4-3807 kr@briskheat.com	NCSX estimat	e) = ~\$*	15,400	

#### **Backup on Pourable Insulation**

From: Geoffrey J. Gettelfinger Sent: Wednesday, May 09, 2007 4:56 PM To: Faul Goranon; Laurence E. Dudek; Wayne T. Reierzen; Ronald L. Strykowsky; Mike Cole; Eradley E. Nelson Cor Jerry D. Lewine; William V. Slavin Subject: MBS 12 - Inmulation

#### Fellows:

Allow me to share the origin of the cost estimate for Paul Goranson's aerogel vacuum vessel insulation.

A very rough volume calculation yielded a volume of about 2.5  $\rm m^{*+3}$  to fill the annulus between the vessel and the modular coils. I assumed that we abould order twice this volume as this is a custom product.

Recall that the stock aerogel from Cabot Corporation has a water dispersant coating that becomes mobile at vessel bake temperatures and was judged an MSM concern earlier in the design process.

Ms. Jodi Bates, a technical person with Cabot, SWAGed that the "calcining" (baking) of the 5 m\*\*3 of aerogel would cost about \$801-\$901k. Allow me to re-emphasize the rough order of magnitude estimate basis.

When polled about whether NCSX should move ahead with this off-normal product request, the NCSX community felt the best logic was to hold off and to mee if this becomes a stock product instead of a "special".



Geoff

WBS Number: 12 WBS Title: Vacuum Vessel Systems Job Number: 1204 Job Title: Vacuum Vessel System Procurements Job Manager: Larry Dudek

#### Thermocouples

 From: Omega Engineering - SCHAALE <EASYLINK@N.VM>

 Date: January 12, 2007 4:01:58 PM EST

 To: Idudek@pppl.gov

 Subject: Sales order # 701979458 PPPL

 6092432080

 Idudek@pppl.gov

 Reply-To: INFO@OMEGA.COM

Hello Mr Dudek, Following is a copy of the quote we have been working on, Your Ref# NCSX-PRL-12-003-00. Please forward a copy of the tag format detail to me at your convenience. If you have any other questions please do not hesitate to call me. Best regards, Bob Schaale 800-359-1660 ex 7646 bschaale@omega.com 203-968-7364 fx

QUOTATION <<<<<<

\_\_\_OMEGA ENGINEERING,

http://www.ome	(3)359-1660 FAX (203)359-7990 ega.com E-Mail: temp@omega.com O 9001 CERTIFIED (Stamford, CT USA)
PPPL	Date 01/12/07
ххх	Quote No. Q701979458        Your No. RDS01005
FAX To ARLE FAX No. (609)2	NE WHITE

Item Qty Part Number Price Discount Net Unit Total No. Description Est. Ship Date A.R.O. Price Amount

1) 105 El1106107/XCIB-E-4-2-3-SHX-M 69.25 69.25EA 7,271.25

XCIB T/C ASSY/UNGROUNDED 4 - 5 Wks

2) 105 EI1106107/XCIB-E-4-2-10-SHX-M 83.25 83.25EA 8,741.25 XCIB T/C ASSY/UNGROUNDED 4 - 5 Wks

3) 210 OSK/TAGGING PROC/ITEM#1 & 2 5.00 5.00EA 1,050.00 PROD ID/SEE CASE FOR FORMAT 4 - 5 Wks

4) 1 SET UP CHARGE 50.00 50.00EA 50.00 FOR MFG OF CUSTOM ITEM 4 - 5 Wks

THIS QUOTATION IS VALID FOR 30 DAYS TOTAL AMT 17,112.50

Please refer to the QUOTE# Q701979458 AWHITE@PPPL.GOV when placing this on order. FAX From CS#622408 TERMS & CONDITIONS Omega Engineering, Inc. (the Company) offers this quotation subject

Omega Engineering, Inc. (the Company) offers this quotation subject to its terms and conditions, as stated in the Company published Handbook and related literature. The Company does not agree to any additional or different terms imposed by individual customers, which are deemed to be material alterations, unless signed by the Company prior to shipment of this order. All quoted delivery dates are subject to product availability, for exact delivery dates, please consult our sales department at time of order.

Assumed ~\$80 unit rate based on the above x 337 (count off drawing) = \$26, 960

WBS Number: 12 WBS Title: Vacuum Vessel Systems Job Number: 1204 Job Title: Vacuum Vessel System Procurements Job Manager: Larry Dudek

Boots - Requistition 405021

	001						9450 1*** 1204 9450 1*** 1204	2007 - \$1800.00 2007 - \$1800.00	2008 - \$0.00 2008 - \$0.00	R. Strykowsky R. Strykowsky	
PRINC				d on 03-12-2007 for		Line item 7: Material: NOM	Assembly Dwg. No. se1 MEX	22-368-r0.pdf, Detail	Dwg. No. se122-371	-r0.pdf Port 11 Winding Form Boot Assy	
PHYSI	IS LABORATORY	NCSX Winding	g Form Boot	Assembly		0	2ty: 6 ea @ \$300.00		Total Price: \$1800	0.00 (Pct tolerance 10%)	
							9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
Requisitio	ner: Thomas Meighan	Buyer	Assigned	Suggested Sources			9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
Deliver to:	Thomas Meighan			Temp Shield Laura Sweeny, Bar Harbor( 9696	667-	Line item 8: Material: NON		22-372-r0.pdf, Detail	dwg. No. se122-375	r0.pdf Port 15 Winding Form Boot Assy.	
	MS41 C-Site B313			Others		0	2ty: 6 ea @ \$300.00		Total Price: \$1800	0.00 (Pct tolerance 10%)	
							9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
Phone:	(609) 243-3053						9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
	CC/WPkgJOB/Exp Cis	FY1 - Amount	FY2 - Amount	Signature Authority	1	Line item 9: Material: NOI		22-376-r0.pdf, Detail	Dwg No. se122-379	-r0.pdf Port 17 Winding Form Boot Assy.	
Line item 1	: Assembly Dwa. No. s	e122-340-r0.pdf Detail 0	)wa No. se122-343-	-r0.pdf Port 2 Winding Form Boot Assy N	ial:	c	2ty: 6 ea @ \$300.00		Total Price: \$1800	0.00 (Pct tolerance 10%)	
NOMEX							9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
	Oty: 6 ea @ \$300.00			0.00 (Pct tolerance 10%)			9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
	9450 1*** 1204 9450 1*** 1204	2007 - \$1800.00 2007 - \$1800.00	2008 - \$0.00 2008 - \$0.00	R. Strykowsky R. Strykowsky		Line item 10	Assembly Dup No. 1	122.280 (Certh Data)	Due No cet22.3	3-r0.pdf Port 18 Winding Form Boot Assy	
	3450 1 1204	2007 - \$1000.00	2000 - \$0.00	н. элтуконъку		Material: NON		122-300-10.pdi, Detai	rung, NU, serzz-se	3-10 par Porc 10 winding Porm Book Assy.	
	: Assembly Dwg. No. s	e122-344-r0.pdf, Detail	Dwg. No. se122-34	7-r0.pdf Port 5 Winding Form Boot Assy	erial	c	2ty: 6 ea @ \$300.00			0.00 (Pct tolerance 10%)	
NOMEX							9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
	Qty: 6 ea @ \$300.00			0.00 (Pct tolerance 10%)			9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
	9450 1*** 1204 9450 1*** 1204	2007 - \$1800.00 2007 - \$1800.00	2008 - \$0.00 2008 - \$0.00	R. Strykowsky R. Strykowsky		Line item 11: Material: NOM		122-384-r0.pdf, Detai	l dwg. No. se122-38	7-r0.pdf Port 8 Winding Form Boot Assy.	
I ine item 1	- Assambly Dun No. s	122.348.40 e.# Datail	Due No se122.35	1-r0.pdf Port 6 Winding Form Boot Assy	arial	0	2ty: 6 ea @ \$300.00		Total Price: \$1800	0.00 (Pct tolerance 10%)	
NOMEX	a reserved a ny res a			· · · · · · · · · · · · · · · · · · ·			9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
	Oty: 6 es @ \$300.00		Total Price: \$180	0.00 (Pct tolerance 10%)			9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
	9450 1*** 1204 9450 1*** 1204	2007 - \$1800.00 2007 - \$1800.00	2008 - \$0.00 2008 - \$0.00	R. Strykowsky R. Strykowsky		Line item 12 Material: NOM	Assembly Dwg. No.se	22-388-r0.pdf, Detail	dwg. no. se122-391	-r0.pdf Spacer Port Winding Form Boot Ar	ssy
							2ty: 3 ea @ \$200.00		Total Price: \$600.	00 (Pct tolerance 10%)	
NOMEX	. Assembly dwg. No. si	rizz-362-ru pdf, Detail	owg. nu. se122-355	-n0.pdf Port 7 Winding Form Boot Assy 1	nac.		9450 1*** 1204	2007 - \$600.00	2008 - \$0.00	R. Strykowsky	
	Qty: 6 ea (\$ \$300.00		Total Price: \$190	0.00 (Pct tolerance 10%)			9450 1*** 1204	2007 - \$600.00	2008 - \$0.00	R. Strykowsky	
	9450 1*** 1204 9450 1*** 1204	2007 - \$1800.00 2007 - \$1800.00	2008 - \$0.00 2008 - \$0.00	R. Strykowsky R. Strykowsky		Line item 13: NOMEX	Assembly Dwg. No se	22-392-r0.pdf, Detail	dwg. No. se122-39	3-r0.pdf Neutral Beam Port Seal Boot 3 Mi	aterial
							2ty: 1 ea @ \$300.00		Total Price: \$300	00 (Pct tolerance 10%)	
Line item 1 Material N		e122-360-r0.pdf, Detail	Dwg. No. se122-36	3-r0.pdf Port 9 Winding Form Boot Assy			9450 1*** 1204	2007 - \$300.00	2008 - \$0.00	R. Strykowsky	
internet. Pe	Oty: 6 ea @ \$300.00		Total Price: \$180	0.00 (Pct tolerance 10%)			9450 1*** 1204	2007 - \$300.00	2008 - \$0.00	R. Strykowsky	
	9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky		2	0.25010264.0000.00	Veren creation action	eren an eren eren som		
	9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky		Line item 14: NOMEX	Assembly Dwg. No. se	122-401-r0.pdf, Detai	Dwg. No. se122-40	5-r0 pdf Port 12 Seal Boot Assy Material	
				1.0. KD 4101K 4. C C			2ty: 6 ea @ \$300.00		Total Price: \$1800	0.00 (Pct tolerance 10%)	
Line item t Material: N	C Assembly Dwg. No. s OMEC	e122-364-r0.pdf, Detail	Dwg. No. se122-36	7-r0.pdf Port 10 Winding Form Boot Ass			9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	
	Qty: 6 ea @ \$300.00		Total Price: \$180	0.00 (Pct tolerance 10%)			9450 1*** 1204	2007 - \$1800.00	2008 - \$0.00	R. Strykowsky	

WBS Number: 12 WBS Title: Vacuum Vessel Systems Job Number: 1204 Job Title: Vacuum Vessel System Procurements Job Manager: Larry Dudek

ion Print Format			05/	10/2007 09:07 AM	Requisition Print Format	05/10/2007 09:07 AM
Line item 15: Assembly Dwg. No. SE	122-004 Detail dwn	nn se122.409.r0 ndf Port 4 \	Modion Form Boot Assy Mate	iat	se122-409-r0.pdf (Line item 15)	
NOMEX	The sol, bearing					
Qty: 6 ea @ \$300.00		Total Price: \$1800.00 (Pct 1				
9450 1*** 1204 9450 1*** 1204	2007 - \$1800.00 2007 - \$1800.00		Strykowsky Strykowsky			
9450 1 1204	2007 - \$1800.00	2000 - 30.00 R. S	зоукомзку			
		Requisition Total: \$24,30	00.00			
Excess Inventory: Not Listed	Reviews:	Chemical - No	Safety - No			
Stockroom Inventory: Not Stocked		Desktop IT - No	Non-Desktop IT - No			
Receipt Inspection Required: Yes		AC Power - No	Labor Resources - No			
Sole Source: No		Telecomm - No	Radiological - No			
BOA: Not Applicable		PAAA - No	Printing - No			
Attachments:		Quality Assurance - Yes	Lift Manager - No			
NCSX-PRL-12-001-00-Signed.pdf		Machining Resource - No				
se122-340-r0.pdf (Line item 1)						
se122-343-r0.pdf (Line item 1)						
se122-344-r0.pdf (Line item 2)						
se122-347-r0.pdf (Line item 2)						
se122-348-r0.pdf (Line item 3)						
se122-351-r0.pdf (Line item 3)						
se122-352-r0.pdf (Line item 4)						
se122-355-r0.pdf (Line item 4)						
se122-360-r0.pdf (Line item 5)						
se122-363-r0.pdf (Line item 5)						
se122-364-r0.pdf (Line item 6)						
se122-367-r0.pdf (Line item 6)						
se122-368-r0.pdf (Line item 7)						
se122-371-r0.pdf (Line item 7)						
se122-372-r0.pdf (Line item 8)						
se122-375-r0.pdf (Line item 8)						
se122-376-r0.pdf (Line item 9)						
se122-379-r0.pdf (Line item 9)						
se122-380-r0.pdf (Line item 10)						
se122-383-r0.pdf (Line item 10)						
se122-384-r0.pdf (Line item 11)						
se122-387-r0.pdf (Line item 11)						
se122-388-r0.pdf (Line item 12)						
se122-391-r0.pdf (Line item 12)						
se122-392-r0.pdf (Line item 13)						
se122-396-r0.pdf (Line item 13)						
se122-401-r0.pdf (Line item 14)						
se122-405-r0.pdf (Line item 14)					The All I CARD IN STREET	01 - 07 U.M
se122-004-r0.pdf (Line item 15)					https://bones.pppl.gov/printreq/7req=405021	Page 4 of 4

WBS Number: 12 WBS Title: Vacuum Vessel Systems Job Number: 1204 Job Title: Vacuum Vessel System Procurements Job Manager: Larry Dudek

Boots - Requistition 405024

							9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky	
VP I	PPL	Demulation 4		d on 03-12-2007 fo	-		eitem 8: Assembly Dwg. No. se erial: G-11 CR	122-352-r0.pdf, Deta	il Dwg. No. se122-354	I-r0.pdf Port 7 Winding For	n Seal Inner Pla
PRINCE	ron PLASMA				r		Qty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)	
PHYSICS	LABORATORY	NCSX Windin	g Form Seal	Plates			9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky	
	er: Thomas Meighan	Buyer	Assigned	Suggested Sources		Lin	eitem 9: Assembly Dwg. No. SE erial: G-11CR	122-004, Detail Dwg	No. se122-358-r0 pc	ff Neutral Beam Port Seal F	ill Plate Assy.
Deliver to:	Thomas Meighan						Qty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)	
	MS41 C-Site B313						9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky	
Phone:	(609) 243-3053						eitem 10: Assembly Dwg. No. s erial: G-11CR	e122-360-r0.pdf, Def	ail Dwg. No. se122-36	31-r0.pdf Port 9 Winding Fo	rm Seal Outer P
							Qty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)	
0	CANPikg-JOB/Exp Cls	FY1 - Amount	FY2 - Amount	Signature Authority	1		9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky	
Line item 1: Material: G-1	Assembly Dwg. No. se 1CR	122-340-r0.pdf, Detai	Dwg. No. se122-34	1-r0.pdf Port 2 Winding Form S	Seal Outer Plate		e item 11: Assembly Dwg. No. s erial: G-11CR	e122-360-r0.pdf, Def	ail Dwg. No. se122-36	2-r0.pdf Port 9 Winding Fo	rm Seal Inner Pi
	Oty: 5 ea @ \$0.00		Total Price: \$0.0	0 (Pct tolerance 10%)			Qty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)	
	9450 1-1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky			9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky	
Line item 2: Material: G-1	Assembly Drwg: No. s 1CR	e122-340-r0.pdf Detai	Dwg. No. se122-34	2-r0 pdf Port 2 Winding Form 5	Seal Inner Plate		e item 12: Assembly Dwg. No. s e. Material: G-11CR	e122-364-r0.pdf, Def	ail Dwg. No. se122-36	5-r0.pdf Port 10 Winding F	orm Seal Outer
	Oty 5 es @ \$0.00		Total Price: \$0.0	3 (Pct tolerance 10%)			Qty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)	
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky			9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky	
Line item 3: Material: G-1	Assembly Dwg. No. se 1CR	122-344-r0.pdf, Detai	I Dwg. No. se122-34	5-r0.pdf Port 5 Winding Form S	Seal Outer Plate		eitem 13: Assembly Dwg. se12: erial: G-11CR	-364-r0 pdf, Detail E	wg. No. se122-366-rd	pdf Port 10 Winding Form	Seal Inner Plate
	Oty: 6 ea @ \$0.00		Total Price: \$3.0	3 (Pct tolerance 10%)			Qty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)	
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky			9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky	
Line item 4: Material: G-1		122-344-r0.pdf, Detai	Dwg. No. se122-34	6-r0.pdf Port 5 Winding Form S	Seal Inner Plate.		e item 14: Assembly Dwg. No. s e. Material: G-11CR	e122-368-r0 pdf, Def	ail Dwg. No. se122-36	9-r0 pdf Port 11 Winding F	orm Seal Outer
	Oty 5 ea @ \$0.00		Total Price: \$0.0	0 (Pct tolerance 10%)			Qty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)	
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky			9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky	
Line item 5: Material: G-1		122-348-r0.pdf Detail	Dwg. No. se122-349	-10.pdf Port 6 Winding Form S	eal Outer Plate	Line Mat	eitem 15: Assembly Dwg. No. s erial: G-11CR	e122-368-r0.pdf, Def			orm Seal Inner F
	Cty: 6 ea @ \$0.00		Total Price: \$0.0	0 (Pct tolerance 10%)			Qty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)	
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky			9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky	
Line item 6: Material: G-1	Assembly Dwg. No. si 1CR	122-348-r0.pdf, Detai	Dwg. No. se122-35	0-r0.pdf. Port 6 Winding Form	Seal Inner Plate		e item 16: Assembly Dwg. No. s e. Material: G-11CR	e122-372-r0.pdf, Def			orm Seal Outer
	Oty: 6 ea @ \$0.00		Total Price: \$0.0	0 (Pct tolerance 10%)			Qty: 6 ea @ \$0.00			(Pct tolerance 10%)	
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky			9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky	
Line item 7: Material: G-1		122-352-rB.pdf, Detai	Dwg. No. se122-35	3-r0.pdf. Port 7 Winding Form	Seal Outer Plate.	Line Mat	eitem 17: Assembly Dwg. No. s erial: G-11CR	e122-372-r0.pdf, Def			orm Seal Inner P
	Cty: 6 ea @ \$0.00		Total Price: \$0.0	0 (Pct tolerance 10%)			Qty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)	

WBS Number: 12 WBS Title: Vacuum Vessel Systems Job Number: 1204 Job Title: Vacuum Vessel System Procurements Job Manager: Larry Dudek

ion Print Format					03/10/2007 09:08 AM	Friday Incontract Mint I interi	Deviewer	Chaminal Ma	Color: No	
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky		Excess Inventory: Not Listed Stockroom Inventory: Not Stocked	Reviews:	Chemical - No Desktop IT - No	Safety - No Non-Desktop IT - No	
and attraction with the second						Receipt Inspection Required: Yes		AC Power - No	Labor Resources - No	
Line item 18: / Plate Material: (	Assembly Dwg. No. s 3-11CR	e122-376-r0.pdf, Det	ail Dwg. No. se122-3	77-r0.pdf, Port 17 Winding	Form Seal Outer	Sole Source: No		Telecomm - No	Radiological - No	
	2ty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)		BOA:		PAAA - No	Printing - No	
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky		Attachments:		Quality Assurance - Yes	Lift Manager - No	
Line item 19: A Material: G-110		e122-376-r0.pdf Deta	il Dwg. No. se122-37	8-r0.pdf Port 17 Winding F	orm Seal Inner Plate	None		Machining Resource - No		
0	2ty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)						
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky						
Line item 20: A Plate Material (		e122-380-r0.pdf Asse	embly Dwg. No. se12	2-381-r0.pdf Port 18 Windir	ng Form Seal Outer					
(	2ty: 6 ea @ \$0.00		Total Price: \$0.00	(Pct tolerance 10%)						
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky						
Line item 21: / Material: G-110		e122-380-r0.pdf Deta	il Dwg. No. se122-38	2-r0.pdf Port 18 Winding F	orm Seal Inner Plate					
(	2ty: 6 ea @ \$0.00		Total Price: \$0.00	) (Pct tolerance 10%)						
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky						
Material: G-11C	R	e122-384-r0.pdf Deta	0.50	5-r0.pdf Port 8 Winding Fo	rm Seal Outer Plate					
0	2ty: 6 ea @ \$0.00			(Pct tolerance 10%)						
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky						
Line item 23: A Material: G-110		e122-384-r0.pdf Deta	il Dwg. No. se122-38	6-r0.pdf Port 8 Winding Fo	rm Seal Inner Plate					
(	2ty: 6 ea @ \$0.00		Total Price: \$0.00	) (Pct tolerance 10%)						
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky						
Line item 24: / 3 Material: G-11	Assembly Dwg. se122 ICR	-388-r0.pdf Detail Di	174/9/10124/10125-000	pdf Spacer Port Winding P	orm Seal Outer Plate					
0	2ty: 3 ea @ \$0.00			0 (Pct tolerance 10%)						
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky						
Line item 25: A Plate Material: 0	Assembly Dwg. No. s G-11CR	e122-388-r0.pdf Deta	il Dwg. No. se122-39	0-r0.pdf Spacer Port Wind	ng Form Seal Inner					
(	2ty: 3 ea @ \$0.00		Total Price: \$0.00	) (Pct tolerance 10%)						
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky						
Fill Plate Materi	al: G-11CR	e122-356-r0.pdf Deta		3-r0.pdf Neutral Beam Port	Winding Form Seal					
0	2ty: 6 ea @ \$0.00		Total Price: \$0.00	0 (Pct tolerance 10%)						
	9450 1*** 1204	2007 - \$0.00	2008 - \$0.00	R. Strykowsky						
h			Requisition Tota	al: \$0.00						

WBS Number: 12 WBS Title: Vacuum Vessel Systems Job Number: 1204 Job Title: Vacuum Vessel System Procurements Job Manager: Larry Dudek

3475 Symmes Road Hamilton, OH 45015	Ferguson Metals		
Phone: 1-800-347-2376	Perguson Metals		
Fax: 513-874-6857	Specialist in Speciality Detailorany		
FACSIMII	E		
to:	FRCH:	2	
Fred	Frank Mefford fmefford@fergusonmetals.com	Sur	charge
COMPANT: Princeton University	4/20/2007	Grades	Fel
FAX NUMBER: 609-243-3030	TOTAL NO. OF PAGES INCLUDING COVER:		2/
RE:	QUOTE VALID FOR:	15-5	0.6
RFQ	15 Days	15-7	1.6
· · · · · · · · · · · · · · · · · · ·	SALES QUOTE	17-4	0.5
I AM PLEASED TO OFFER THE FOLLOWING:	PROCESSION CONTRACTOR CONTRA	17-7	1.2
Description AMS	AND A REPORT OF A	185R	0.1
625 .500 36x120 5599 625 .750 36x120 5599	10.00+Sur	201	0.8
625 .750 36x120 5599	36 120 6 6,090# 16.00+sur	301 7.0%	1.2
Quoted + surg	harge at the time of shipment 16.6	302/304/304L	1.4
Quoted + sure	harge at the time of shipment	304-8.5%	1.4
	W \$/1 -> \$ 27,50	305	2.0
	CUTC. 110 H	309	2.0
FOB:45015	A286?	310 316/316L	3.
Estimated Load Time:14 wooks	A100.	310/310L 317L	2.6
** Subject to prior sale.		321	1.
		347	1.
Thanks for the opportunity.		409/409 Mod	0.0
		410/4105	0.0
manno		430	0.0
and the second	Inconel 625 Quote	434	0.
		439	0.
Frank Mefford		440A	0.0
	1236	Alloy 286	4.
	Jacob and a second seco	Alloy 625	10
		Alloy 718	8.4
		Alloy HX	9.2
		www.ferausonn	notale -
7 64	and on Wine	www.rergusuin	ieidis L
	ock and On-Time		
	inless Steels & Alloys		



3475 Symmes Road Hamilton, OH 45015

Surcharge Totals for February 2007 – June 2007

2/1/07 - 2/28/07 0.6606	3/1/07 - 3/31/07	4/1/07 -	F14 10 7	
3033.0		4/30/07	5/1/07 - 5/31/07	6/1/07 - 6/30/07
	0.7188	0.8284	0.9719	1.0645
1.6736	1.7734	1.9641	2.2500	2.4095
0.5820	0.6346	0.7327	0.8630	0.9468
1.2753	1.3793	1.5773	1.8250	2.0024
0.1254	0.1318	0.1555	0.2028	0.2246
0.8050	0.8784	1.0079	1.1733	1.2887
1.2545	1.3462	1.5370	1.7785	1.9520
1.4215	1.5257	1.7421	2.0128	2.2098
1.4924	1.6127	1.8419	2.1263	2.3341
2.0182	2.1772	2.4821	2.8553	3.1332
2.0786	2.2427	2.5561	2.9401	3.2309
3.2314	3.4810	3.9604	4.5393	4.9847
2.2533	2.3962	2.6703	3.0543	3.2930
2.6845	2.8430	3.1467	3.5894	3.8544
1.5916	1.7166	1.9552	2.2522	2.4679
1.5710	1.6970	1.9374	2.2351	2.4519
0.0940	0.1079	0.1319	0.1758	0.1861
0.0793	0.0942	0.1201	0.1651	0.1777
0.0941	0.1105	0.1382	0.1865	0.2074
0.2898	0.3082	0.3398	0.4103	0.4320
0.1248	0.1404	0.1660	0.2140	0.2353
0.0941	0.1105	0.1382	0.1865	0.2074
4.1030	4.0020	4.0740	4.5000	5 2099
10.9488	10.7978	11.5031	12.1638	13.6292
0.4400	0.3170	0.3000	9.5060	10.7534
9.2413	9.1268	9.7192	10.2307	11.4262
	0.5820 1.2753 0.1254 1.2545 1.4215 1.4215 1.4215 1.4215 2.0786 3.2314 2.2533 2.6845 1.5916 1.5710 0.0940 0.0793 0.0941 0.2898 0.1248 0.0941 1.4092 1.0.4888	0.5820 0.6346 1.2753 1.3793 0.1254 0.1318 0.8050 0.8784 1.2545 1.3462 1.4215 1.5257 1.4924 1.6127 2.0786 2.2427 3.2314 3.4810 2.2533 2.3962 2.6845 2.8430 1.5916 1.7166 1.5710 1.6970 0.0940 0.1079 0.0793 0.0942 0.0941 0.1105 1.2898 0.3082 0.0941 0.1105 1.4939 4.555 10.3486 10.7978 0.3400 0.5176 9.2413 9.1268	0.5620         0.6346         0.7327           1.2753         1.3793         1.5773           0.1254         0.1318         0.1555           0.8050         0.8784         1.0079           1.2545         1.3462         1.5370           1.4215         1.5267         1.7421           1.4924         1.6127         1.8419           2.0182         2.1772         2.4821           2.0766         2.2427         2.5561           3.2314         3.4810         3.9604           2.2533         2.3962         2.6703           2.6455         2.8430         3.1467           1.5916         1.7166         1.9524           0.0793         0.0942         0.1201           0.0793         0.0942         0.1201           0.0941         0.1105         0.1382           0.2898         0.3082         0.3382           0.0941         0.1105         0.1382           0.0944         0.1105         0.1382           0.0941         0.1105         0.1382           0.3048         10.7976         1.5031           0.4408         0.4707         1.5031	0.5820         0.6346         0.7327         0.8630           1.2753         1.3793         1.5773         1.8250           0.1254         0.1318         0.1555         0.2028           0.8050         0.8784         1.0079         1.1733           1.2545         1.3462         1.5370         1.7855           1.4215         1.5257         1.7421         2.0128           1.4924         1.6127         1.8419         2.1263           2.0182         2.1772         2.4821         2.8553           2.0766         2.2427         2.5561         2.9401           3.2314         3.4810         3.9604         4.5393           2.2533         2.3962         2.6703         3.0643           2.6455         2.8430         3.1467         3.5894           1.5916         1.7166         1.9552         2.2521           1.5710         1.6970         1.9374         2.2351           0.0733         0.0942         0.1201         0.1661           0.0941         0.1105         0.1382         0.1865           0.2898         0.3082         0.3398         0.4103           0.2448         0.4044         0.1660

5/7/2007 1:08:00 PM