NATIONAL COMPACT STELLARATOR PROJECT				
Engineering Change Proposal (ECP)				
COVER PAGE				
(TO BE COMPLETED BY SYSTEMS ENGINEERING SUPPORT MANAGER)				
Originator: Bob Simmons Date: February 16, 2005				
ECP No: 023	E	CCP Title: Charpy V-Notch Require	ements	
Required Reviewers				
Required Reviewers for this ECP: P. Hietzenroeder, Brad Nelson, Dave Williamson				
ECP Approval Level				
Expedited ECP?				
Change Level: 3 Project				
Approving Official: 3a Expedited ECP - Engineering Manager				
Actions Revise MCWF CSPEC (NCSX-CSPEC-141-03) by March 31, 2005 to reflect revised Table 3-2.				
APPROVALS				
(TO BE COMPLETED BY APPROVING OFFICIALS)				
Change Level	Approving Official	Approval?	Signature	
3	NCSX Projec Manager	ct Yes No		
3a (Expedited ECP)	NCSX Engineering Manager	g Yes No		
2	NCSX Federa Project Direct	al Yes No tor		
1	Associate Director OFF	ES Yes No		
0	Under Secreta of Energy	ary Yes No		

E	ngineering Change Proposa	l (ECP)			
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	PART I (TO BE COMPLETED BY OPICINATOP)				
Originator: Bob Simmons Date: February 16 2005					
Originator. Dob Simila	Overview of Change	10, 2005			
Type of of ECP:	EXPEDITED STANDAR	D			
Type of Change:	TECHNICAL COST SCH	IEDULE 🗌 EDITORIAL			
(Check all that Apply)					
Reason for Change: We prototype phase, and com qualification material for supplier's data, and it is l	Ve did not have impact testing requirements asequently testing of this was not done. While welding, it was noted that we did not have da lower than we specify (50J vs. 61 J).	for the weld material during the reviewing the weld procedures and ata for the weld. MetalTek sent the			
Impacted WBS Elemen	ts: WBS 141				
Impacts of Change (Br to:	riefly Describe): Revise Table 3-2 (Minimum	Mechanical Properties) in CSPEC			
Temperature	77K	293K			
Elastic Modulus	21 Msi (144.8 Gpa)	20 Msi (137.9 Gpa)			
0.2% Yield Strength	72 Ksi (496.4 Gpa)	34 KSI (234.4 Gpa)			
Flongation	93 KSI (053 Gpa) 32%	78 KSI (357.8 Opa) 36%			
Charpy V – notch	35 ft lbs (47 4 I)	50 ft-lbs (67 8 I)			
Energy		50 H 105 (07.0 V)			
Note: Charpy V-Note 293K. Those V-note based on their testing than the casting alloy, give it good welding material property val brittleness of a mater lower value is considered.	ch energies were formerly 45 ft. lbs (61.0 J) h values were the values MetalTek was willing of the actual casting alloy. The welding alloy , chosen to give it good welding properties. The properties results in lower V-notch values. T lue that's used in engineering calculations ial. The original casting V-notch values were ered acceptable.	for 77K and 60 ft lbs (81.3 J) for g to guarantee for the casting alloy, is a different chemical composition e tradeoff is that biasing the alloy to 'he v-notch value is not a "typical" - it's an indicator of the lack of e very conservative, so accepting a			
Assessment of Other O	ptions: None				
Attachment: NCSX-CS	DPEC-141-07-0A				