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The Evaluation of Mechanical Integrity for the Localized Skeleton of KSNP Fuel Assembly

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Abstract

Skeleton of fuel assembly used in Korea Standard Nuclear Power Reactor is localized. To evaluate the integrity of localized skeleton and its components, grid spring and arch load-deflection test, grid static compression test, grid dynamic impact test, the tensile test of guide tube and flange/endfitting welding and the shear test of guide tube and grid welding are performed. The test results show that the localized skeleton and its components of KSNP FA has the same performance in reactor and mechanical integrity comparing with those of the imported skeleton and its components.

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16x16

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(1) WH(CENP)

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KSNP

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KNFC

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2

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2.1

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3, 4

5

2.2

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6,7

2.3

Pendulum

Through Grid

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Hammer

8

9

3

4

2

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TIG(Tungsten Inert Gas)

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TIG

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1

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4.

TIG(Tungsten Inert Gas)

(Spot Welding)

As-built

700 ppm Li

6

10

TIG

Spot

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5.

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2)

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3)

TIG ,
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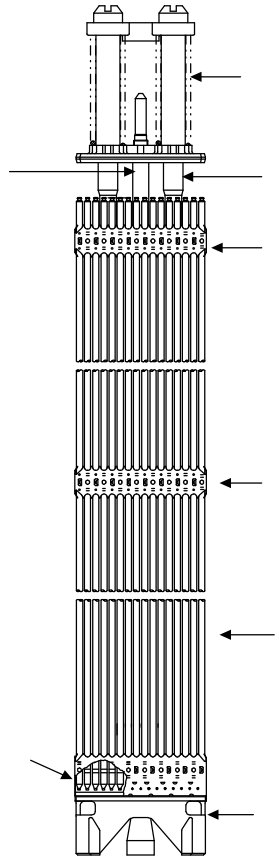
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1. KNF-TR-FA1-02004, Rev.00, Cegud 가 , 2002. 4.

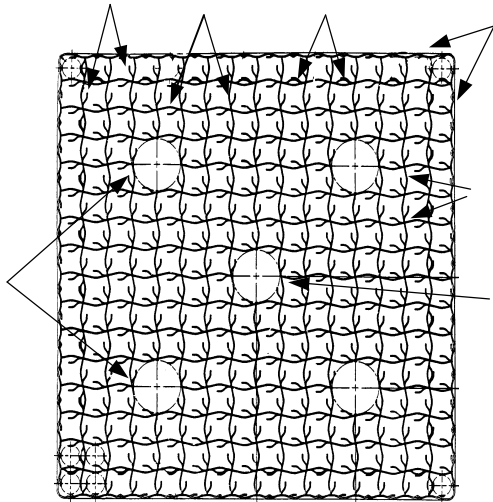
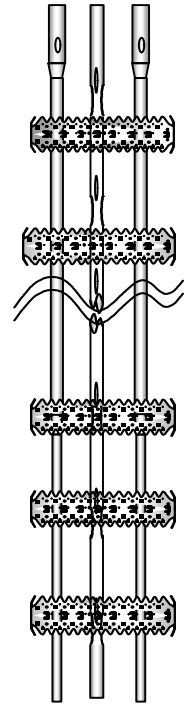
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			[lbs, (N)]		
		CP-T1	10,139(45,102)	-	
		CP-T2	11,067(49,229)		
		KP-T1	10,707(47,629)		: 1,500 lbs/ 1GT
		KP-T2	10,292(45,783)		
		KP-T3	10,651(47,380)		
		KP-T4	10,356(46,066)		
		CE-T1	10,522(46,806)	-	
		CE-T2	10,392(46,225)		
		KE-T1	11,287(50,209)		: 1,500 lbs/1 GT
		KE-T2	10,613(47,211)		
		KE-T3	10,409(46,303)		
		KE-T4	10,184(45,300)		

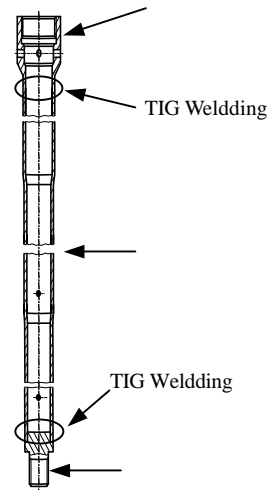


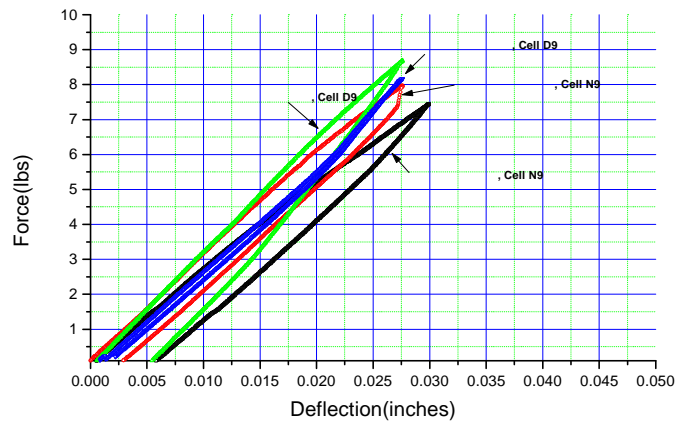
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1. KSNP

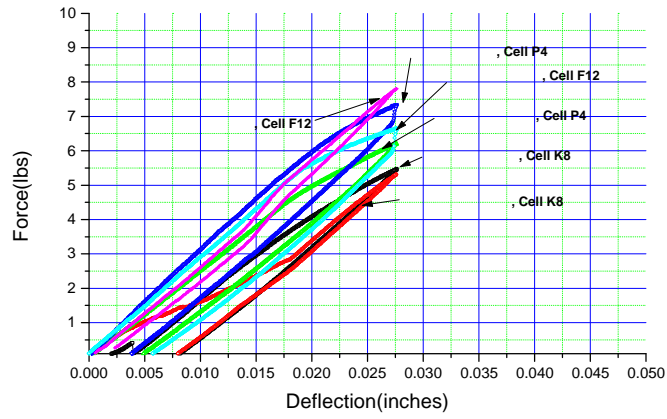


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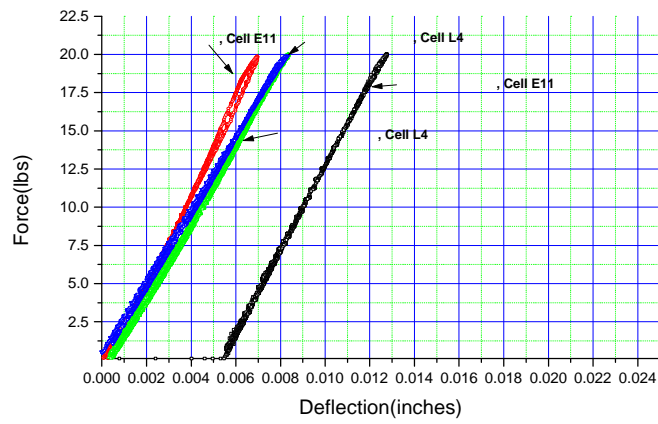




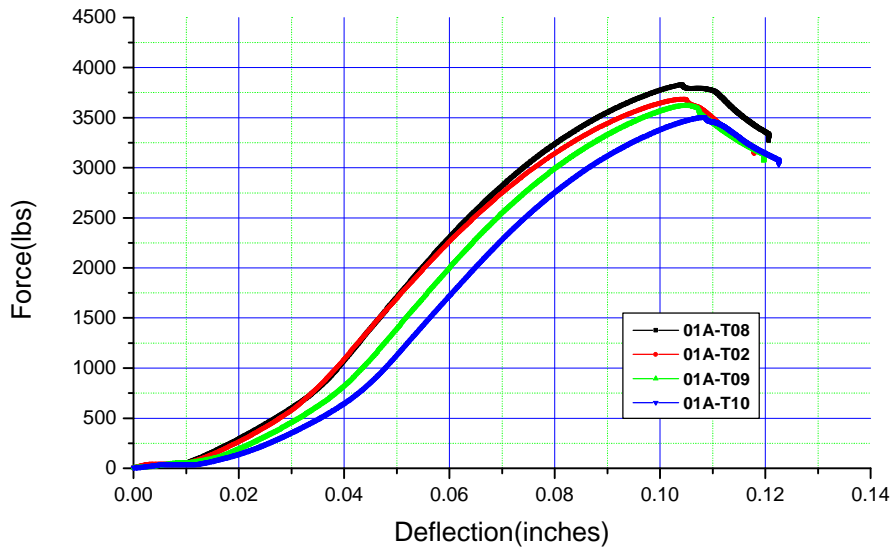
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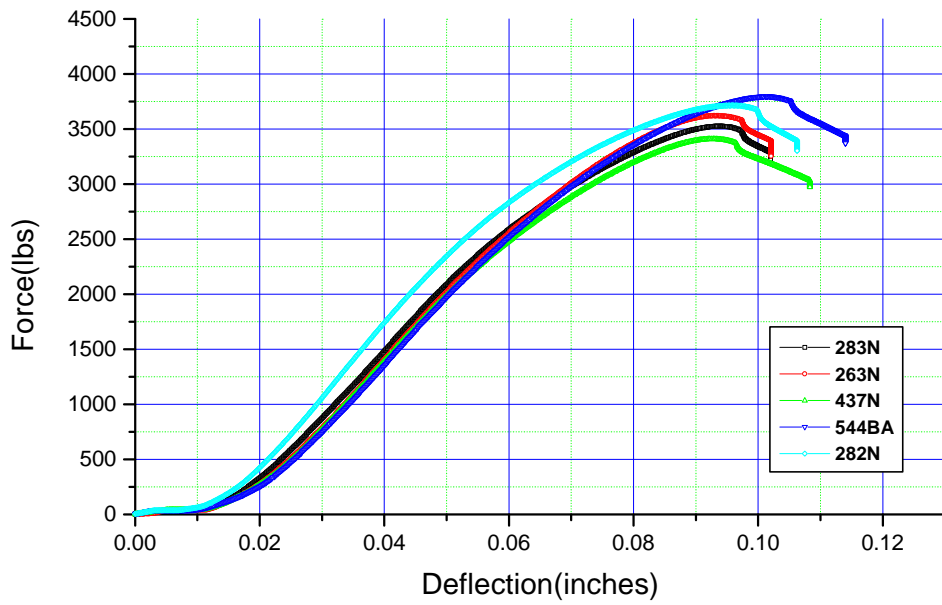
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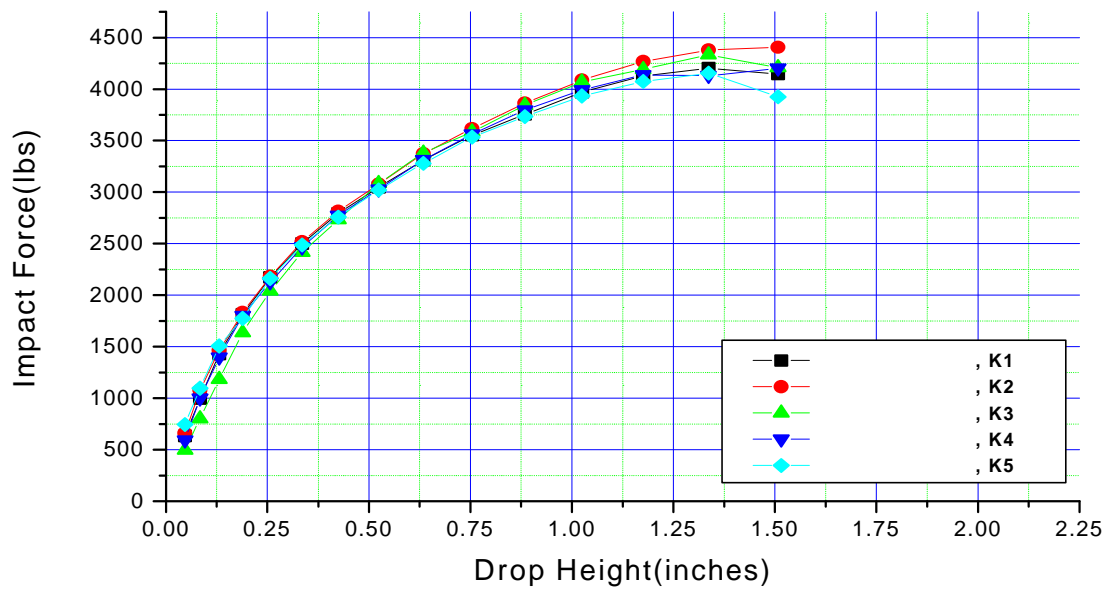
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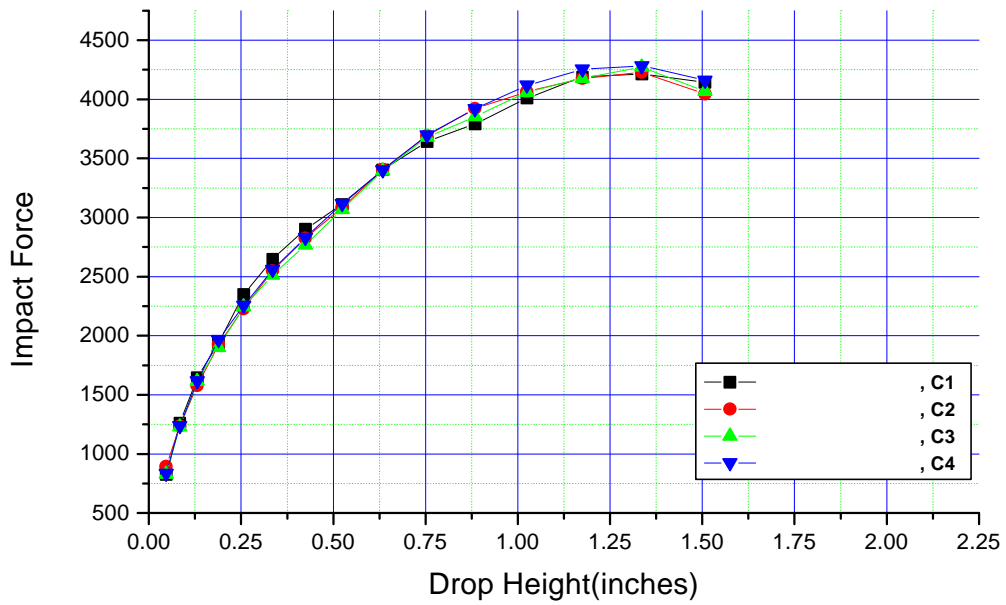
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