

## Natural Vibration and Flow-Induced Vibration Analyses for a Grid Structure

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 and K. H. Yun

1.

(grid) Fig. 1 (4) Fig. 1  
 Fig. 1 ( )가  
 가  
 가 (1)  
 가 (2)

2.

(vortex-shedding) 가  
 (flow-induced) Fig. 2(a)  
 Tacoma 가 1940 Fig. 2(b)  
 가 18 m/s



Fig. 1 Fuel assembly system and its protective grid.

† ;  
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\*  
 \*\* ( )

(rigid body)  
 ANSYS Fig. 3 Fig. 3(a) 1  
 가 4.37 kHz Fig. 3(b) 5  
 가 6.22 kHz  
 + 가

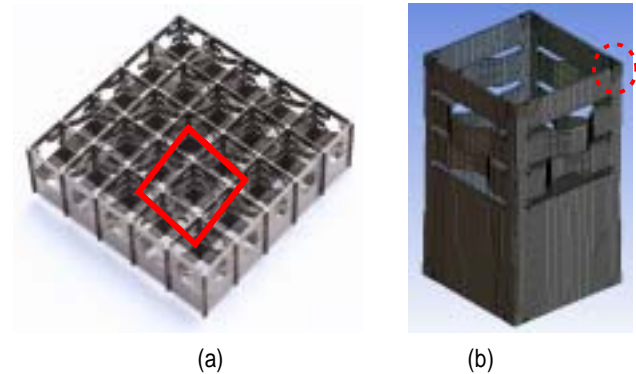


Fig. 2 Protective grid prototype and its finite-element model.

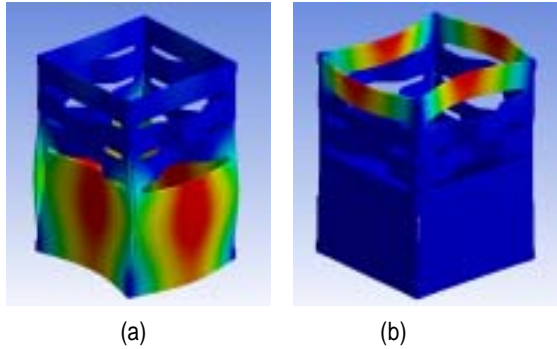


Fig. 3 Mode shape obtained by the finite-element analysis.

3.

ANSYS-CFX  
 2 Fig. 4  
 (a) swirling vector, (b)  
 (c) (vortex)

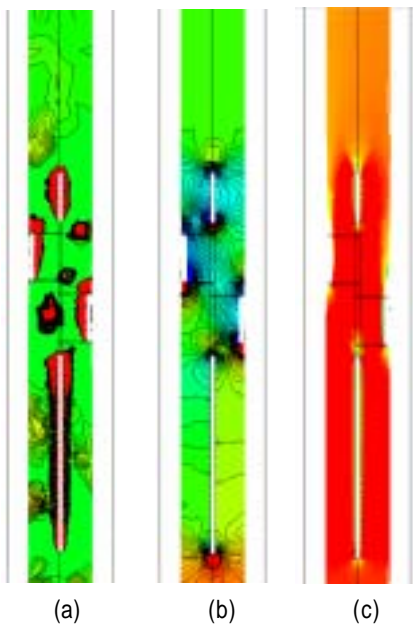


Fig. 4 Flow-field around the cross-section of the protective grid.

4.

가  
 가 Fig. 5  
 가

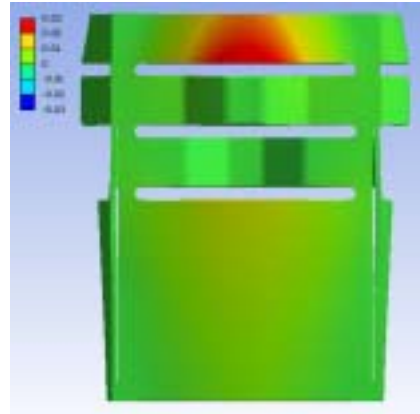


Fig. 5 Vibration response due to the excitation of the vortex-shedding.

5.

(rigid body)

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