

# CONTACT STIFFNESS vs. REALITY?? — HOW SHOULD STIFFNESS BE CHOSEN??

◆ WHEN THE CASK IS PLACED ON THE ISFSI, THERE IS A SMALL LOCAL DEFORMATION UNDER THE PAD.

◆  $W$  = weight of loaded cask = **360,000 lb.**

◆  $d$  = local deflection under cask due to weight

◆  $K$  = contact stiffness =  $W/d$ ; or,  **$d = W/K$**

◆ **KAHN'S ASSUMPTION ->**

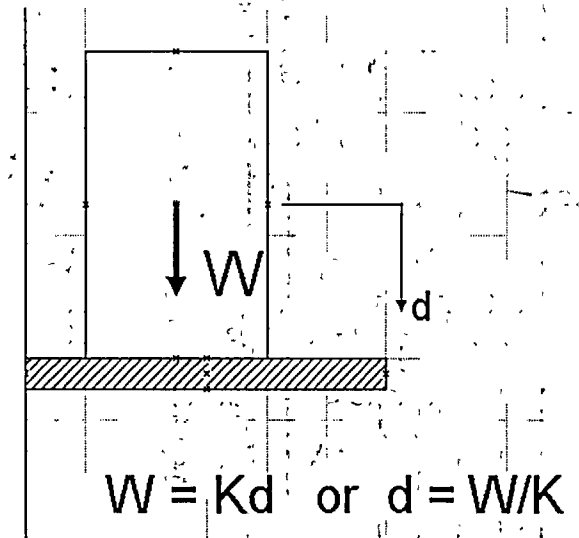
**$K = 1,000,000 \text{ lb/in}$  ;**

**$d = 360,000 / K = 0.36''$**

◆  $K = 10,000,000 \text{ lb/in}$ ;  $d = 0.036''$

◆  $K = 45,000,000 \text{ lb/in}$ ;  $d = 0.008''$

◆  $K = 454,000,000 \text{ lb/in}$ ;  $d = .00079''$



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ASLB HEARINGS-Spring, 2002

**NUCLEAR REGULATORY COMMISSION**

Docket No. \_\_\_\_\_ Official Exh. No. 91  
In the matter of \_\_\_\_\_  
Staff \_\_\_\_\_ IDENTIFIED \_\_\_\_\_  
Applicant X \_\_\_\_\_ RECEIVED \_\_\_\_\_  
Intervenor \_\_\_\_\_ REJECTED \_\_\_\_\_  
Other 2 \_\_\_\_\_ WITHDRAWN \_\_\_\_\_  
DATE 5-7-02 Witness \_\_\_\_\_  
Clerk \_\_\_\_\_ J