

MASON Elastomeric Vibration Isolation Hangers

(Case study in Tunnel/Underground railway ventilation system vibration isolation measure)

Mason Industries (HK) Ltd



Elastomeric Vibration Isolation Hangers for Tunnel Ventilation Fan (High Temperature Application at 250°C, 1 hour)

Route 8 - Nam Wan Tunnel (南灣隧道) is a major tunnel links Tsing Yi and Cheung Sha Wan district in Hong Kong. Construction was commenced in 2003 and tunnel was commissioned in Dec 2009. In order to the supply varying airflow to meet changing traffic conditions and maintain operation during emergency situations, 56 tunnel ventilation fans were placed.

Since the application works extreme temperature conditions (can up to high temperature at 250°C), therefore its vibration isolation measure must be well-equipped to perform under this temperature condition.

In this case, Mason's vibration isolator (model #HD-CS) was applied as its excellent element "fluoroelastomer from Viton®, is proved that it could remain elastic indefinitely in temperature up to 204°C or in intermittent service up to 260°C.

Job Facts

Job : Route 8- Nam Wan Tunnel
Ventilation system : 56 nos. TVF jet fan
Fan weight : 450kgs – 680kgs

Our Projected Isolation Solution

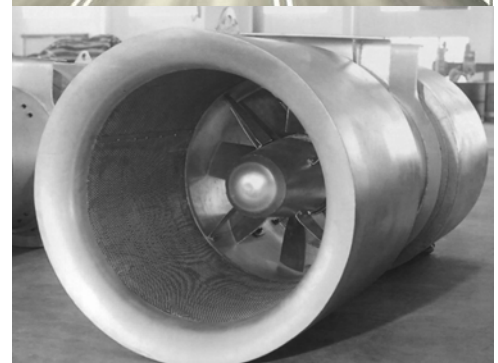
Isolator model : "MASON" HD-CS vibration isolator
Material : "DuPond" from Viton®
Material specialty : Excellent for use at working temperature up to 250°C (over 1 hour)
Rated deflection : 10 mm
Isolation efficiency : > 90% at 1450rpm (~24Hz excitation frequency)
Qty : 224 nos.



Viton®
fluoroelastomer



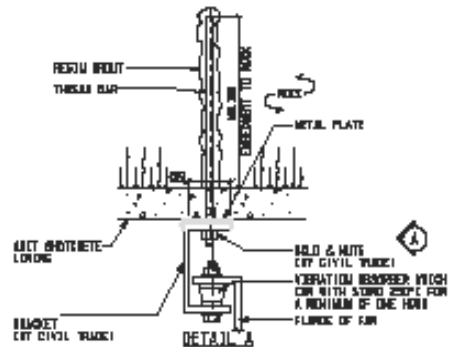
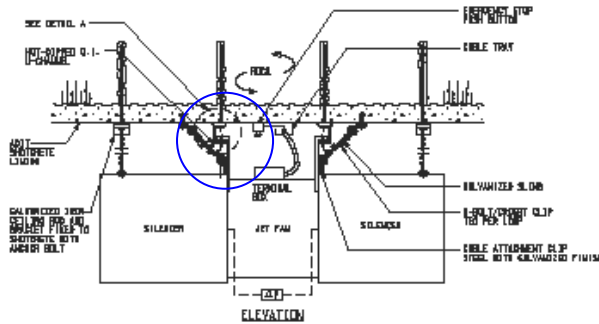
Nam Wan Tunnel



TVF Jet Fan



Installation



About "MASON" vibration isolator (model #HD-CS)

Viton, the major element of isolator is proved to remain elastic indefinitely in temperatures up to 204°C(400°F) or in intermittent service up to 260°C(500°F). And its double deflection Viton Element is supplied with a projecting bushing preventing steel to steel contact.

<p>MASON INDUSTRIES, Inc. Manufacturers of Vibration Control Products NY Mailing Address: PO Box 410, Smithtown, NY 11787 350 Rabro Drive 2101 W. Crescent Ave., Suite D Hauppauge, NY 11788 Anaheim, CA 92801 831/548-0282 714/635-2727 FAX 831/548-0279 FAX 714/635-5738 Info@Mason-Ind.com Info@MasonAnaheim.com</p>	<p>CERTIFIED FOR : JOB NAME : CUSTOMER : CUSTOMER P.O. : MASON M.I. : DWG. NO. :</p>	<p>TYPE HD-CS Double Deflection Viton Element</p>																													
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<p>Viton remains elastic indefinitely in temperatures up to 204 °C (400 °F) or in intermittent service up to 260 °C (500 °F). Use of HD-CS at temperatures over 204 °C (400 °F) will shorten its elastic lifespan. Continuous service limits as listed by Dupont are:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 3000 Hours @ 232 °C (450 °F) <input type="checkbox"/> 1000 Hours @ 280 °C (500 °F) <input type="checkbox"/> 240 Hours @ 288 °C (550 °F) <input type="checkbox"/> 48 Hours @ 316 °C (600 °F) 																															

Should you have any queries in regards to the case or product, feel free to contact Mr. Patrick Tsang (our Sales Manager) for further discussion at your convenience.