

# Newsletter



Year 5, 2007-2



## VIBRATEC AKUSTIKPRODUKTER AS

*Akustikprodukter Norge AS* changes name to *Vibratec Akustikprodukter AS* from 1st of Januar 2008. E-mail addresses will gradually change to "[name@vibratec.no](mailto:name@vibratec.no)", but the old addresses will still be in use for a period of time.

## SOUND TEST LAB, VOLVO CARS

The construction of a new sound test lab is being carried out at *Volvo Cars* in Gothenburg. The lab is designed as a floating concrete box elastically mounted on 1070 pads in the materials *CDM-80* and *-81* as well as 223 sheets of varying density in the *CDM-PF* (polyurethane) series. Sheets and pads are glued onto the foundation and a



5 mm sheet metal is glued to the top of the pads, the metal then works as a permanent formwork for casting. To seal the distance caused by the pads an expanding strip in polyurethane was used. *Vibratec* is to carry out dimensioning and installation of pads, sheets, expanding strip, cover plastic and sheet metal including welding.

## NATIONAL ACADEMY OF ACTING, STOCKOLM

A large number of spring packages (totally 13 different types) have been designed to carry the weight of the steel structure in two theatres. Some spring packages were provided with movement limiters to minimise the motion at indoor wind loads. Resilient ceiling hangers and wall fixings as well as floor battens for floating concrete floors, rehearsal rooms, etc. were also supplied by *Vibratec* to *NCC*. The building is still under construction and is estimated to be completed in the spring of 2008.

## SOUND LAB AT THERMIA HEAT PUMPS

The construction of a reverberation room and a semi-anechoic room was started during November at *Thermia Heat Pumps* in Arvika.

Both rooms are built as detached boxes with floating concrete floors. The floors are placed on 60 mm high pads of the material *CDM-80*, with extra pads on the edges to catch the additional load from the walls and ceiling. *Vibratec* carried out the dimensioning as well as the installation incl. reinforcing and casting. A similar room has also been delivered to *Oiltech* on Lidingö, Stockholm.

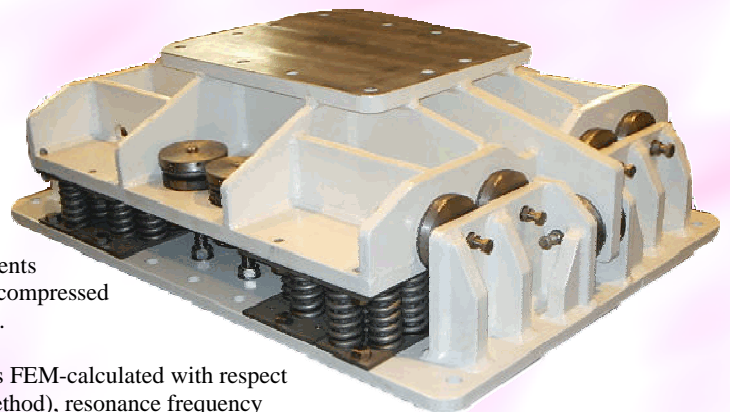


## JOHNSON MATTHEY

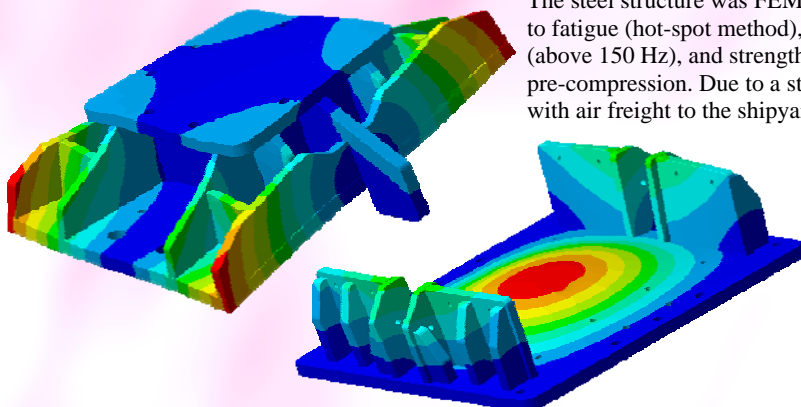
A test bed for larger diesel engines has been constructed at *Johnson Matthey*. The test bed consists of a 1 m thick concrete foundation that is elastically mounted on spring packages from *Vibratec*. To minimise lateral movements the foundation is supported sideways by adjustable machine mounts. Damping has been added to the system with an elastic element inside each spring. The spring packages can be vertically adjusted with screws that are accessible through pipes casted in the foundation according to a concept from *Olle Goffe* at *WSP Akustik*.

## OFFSHORE ISOLATORS TO AIBEL

16 pcs of spring AVMs (anti vibration mounts) with dimensions up to 1600x1300 mm have been delivered to *Aibel* for elastic mounting of Compressors. Each compressor module, weighing 300 tons, will be supported by 4 AVMs. One AVM is designed as a fix-point while the other 3 are sliding points to allow for thermal expansion of the compressor base frame. The AVMs are designed for a deflection of 27 mm and a natural frequency of about 3,2 Hz, and they have "snubbers" to take up dynamic forces at ultimate- and accidental limit states (ULS and ALS). All components were manufactured in AISI316 acid proof steel and the isolators were pre-compressed 35 mm on site so that they could be pushed into position under the module.



The steel structure was FEM-calculated with respect to fatigue (hot-spot method), resonance frequency (above 150 Hz), and strength in relation to ULS/ALS as well as deformation and strain arisen at pre-compression. Due to a strict time schedule the isolators, weighting about 43 ton, were sent with air freight to the shipyard in Singapore.



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## BALLAST MATS TO SL



*Vibratec* has received an important order for vibration isolating ballast mats for the bridges at Skogskyrkogården, Hökarängen and Farsta Centrum. A total area of 4632 m<sup>2</sup>.



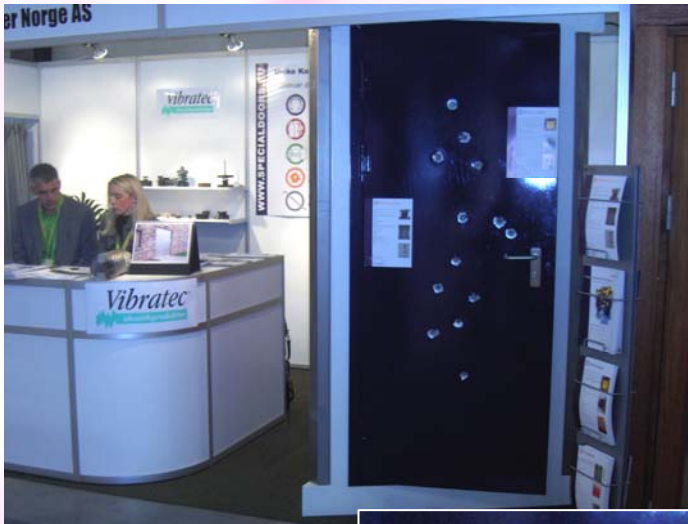
The mats are in the material *CDM-42* and will give an insertion loss of 17 dB over the frequency band 40-120 Hz. Over the years *Vibratec* has supplied ballast mats and rail pads to other customers like *Oslo Sporveier* and *Jernbaneverket*.

## EXHIBITIONS

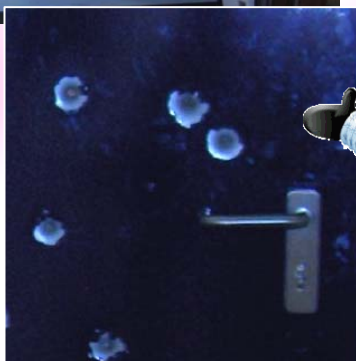
Since the last news letter we have been active as exhibitors at a number of exhibitions, among them *Norshipping*, *Nordic Rail* and, for the first time, *Neva* in S:t Petersburg, Russia, and *Bygg Reis Deg* in Lilleström, Norway.

At *Nordic Rail* in October we noted a great interest for *CDM's* new systems for railway isolation, *Modulix*, *Stero* and *GSF*.

As a result of our participation at *Neva* in S:t Petersburg we now have a partner in Russia and have also received our first orders.



At *Bygg Reis Deg* our supplier *Merford* displayed their new sound-/fire-/burglary-/ballistic resistant doors. The door on display with bullet marks got a lot of attention. We had a high number of visitors at the stand, and we observe an increasing demand for sound isolating products for the building market.



## NEW CO-WORKERS IN HORTEN

We continue to grow and our wire-isolators sell like hot cakes. *Kjell Arne Fanuelson* started working for us in May and *Kjetil Vike* in August. Together they provide a welcome increase in our production capacity. This year we will manufacture nearly 12 000 wire rope isolators! In November *Geir Akselsen* joined us as sales engineer and *Geir* will be responsible for sales and marketing for the building and industry markets. We are expecting a significant increase in sales of *CDM* and *Merford* products with *Geir* on the team.

## NEW SWEDISH MD, NEW ORGANISATION

*Svante Hägerstrand* will take over as MD in Sweden starting 2008. *Svante* (M.Sc) has background as consultant and project manager, and he started working at *Vibratec* in 1998 as salesman and later Technical Manager. The current MD *Kjell Johansson* will take a step down, but continue as senior consultant. Furthermore, the Swedish-Norwegian co-operation within the company will be strengthened as *Alf-Einar Løberg* (MD in Norway) will get overhead responsibility for marketing, and *Svante Hägerstrand* will get similar technical responsibility.

## SPRING PACKAGES TESTED AT VTT

In collaboration with *Wärtsilä* a number of tests have been carried out on *Vibratec's* spring packages to ascertain the strength when exposed to earthquake loads.



The result was above all expectations; the springs can be exposed to loads corresponding to 160 mm lateral deflection. This result in a permanent deformation of the springs but remarkably the axial spring constant is unchanged. The springs stay connected to the top/bottom plates thanks to *Vibratec's* attachment system.

The result means that *Wärtsilä* passes the earthquake demands in California without adding mechanical movement limiters to the spring mounts.

## AND FINALLY *Vibratec Akustikprodukter*

would like to thank you for an incredible year and at the same time wish you a

**MERRY CHRISTMAS** and a **HAPPY NEW YEAR**

Finally our thoughts go to all people affected by natural disasters, diseases or other types of sorrow and distress. Therefore *Vibratec Akustikprodukter AB* has, in the same way as previous years, chosen to donate all the money that we spent earlier on Christmas cards, gifts, etc. to *The Swedish Childhood Cancer Foundation*, where we are certain the money will come to great use.



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