



Rubber in Engineering

Rubber Antiseismic Devices

Rubber Consultants offers clients access to expertise and testing facilities in the field of rubber seismic protection developed over more than thirty-five years. It is a unit of the Tun Abdul Razak Research Centre (TARRC) which pioneered the development of High Damping Rubber Bearings for seismic isolation. We collaborated in the first shaking-table tests of model structures mounted on isolators at the Earthquake Engineering Research Center in Berkeley. This work led to the development of the isolators used in the Foothill Communities Law and Justice Center in California, the first building in the USA to be mounted on rubber isolators, and the first in the world to use high damping natural rubber isolators.

Services available to clients include:

- Design of rubber isolators
- Quality Assurance of bearing manufacture
- Specifying rubber properties
- Advice on feasibility of proposed rubber properties
- Review of designs
- Modelling of rubber for FE and dynamic analyses
- Testing of rubber
- Diagnosis of causes of premature bearing failure
- Biaxial testing of bearings
- Supply of bearings and viscoelastic dampers in collaboration with manufacturers

We have participated in International Projects to construct seismically isolated buildings in Indonesia, China and Algeria, and to rehabilitate existing buildings in Armenia. We have designed the rubber isolators for the projects, and been closely involved in the manufacture and testing of the bearings. We have participated in BRITE-EURAM projects on laminated bearings and on other antiseismic devices, our contribution to the latter being viscoelastic dampers and rolling ball isolators.

Rubber Consultants can provide technical back-up to manufacturers of engineering rubber products. Our most recent achievement has been to provide technical support to the manufacturer of the seismic rubber bearings for the 24km second Penang bridge in Malaysia. The bearings were designed by TARRC/Rubber Consultants engineers in collaboration with their colleagues in Malaysia.

Consultancy and contract research are Rubber Consultants' primary business. The laboratories also have a manufacturing capability suitable for small projects or prototypes; good contacts exist with manufacturers for sourcing production on a larger scale. Rubber Consultants is able to offer independent advice to the design engineer. If a project involves antiseismic devices, expert help at the design stage could save problems and delays later.

For further information please contact:

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Rubber
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TESTING • INNOVATION • SOLUTIONS
since 1984

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