PROJECT SPOTLIGHT

New Container Inspection Area

Ministry of Agriculture & Fisheries (MAF), Port of Auckland, New Zealand

The non-corroding nature of ENDURO provided significant benefits for the concrete exposed to coastal conditions.



The Ministry of Agriculture & Fisheries (MAF) plays a significant role in enabling international market access for New Zealand's agriculture, food, forestry and related products. Sea containers arrive every day in New Zealand from all over the world, bringing with them the possibility of new unwanted pests and diseases. To prevent this from happening MAF operate stringent inspection systems for all containers entering New Zealand.

As part of these inspection facilities, Canam Construction have recently completed (lan 2011) a new 600m² concrete inspection area which will accommodate high volumes of container traffic. Engineers, Beca NZ, called upon the Propex distributor, Novocon NZ, to offer advice for the reinforcement of the 350mm deep slab and expressed an early interest in the use of macro-synthetic fibres because the non-corroding nature of these fibres provided significant benefits for the concrete exposed to coastal conditions.

Beca NZ originally considered the use of 2 layers of steel mesh reinforcement in the 45 Mpa concrete slab but after detailed engineering discussions, specified the use of ENDURO HPP45 macro-synthetic fibres at a dosage of 6 kg/m³. The 210m³ concrete slab was pumped in one operation with dowel bars being carefully placed within the concrete by means of support cages at free movement joints which were subsequently sawn induced at 8m centres. The concrete received a simple broom finish.

ENDURO fibres were considered to be an excellent alternative to traditional steel wire mesh and offered many technical and practical advantages including increased impact resistance and material/labour savings.

PROJECT DATA

Project: Ministry of Agriculture & Fisheries (Auckland, NZ)

Application type: Container Inspection Area

Fibre type: ENDURO HPP45

Dosage rate: 6 kg/m³

Engineers: Beca

Contractor: Canam Construction

Flooring contractor: Wrathalls Flooring

Concrete producer: Allied Concrete Auckland



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