



Examenskod ACEX10



Can plastic save a train from derailment?

Did you know that 4mm of differential settlements are enough to let a train derail, causing a tragic loss of human lives?

Polymeric materials are used in several civil engineering applications. They can be used to create permeable membranes, called “geotextiles”, capable of improve the mechanical behaviour of earth structures for railways, such as embankments. Can geotextiles avoid the development of too large values of differential settlements?

The project includes simple numerical analyses to be carried with and without geotextiles. The aim is to verify when the differential settlements at the top of the embankment (where the trains travel) is smaller than an allowable value. The project can be written in English.

Literature recommendation:

- Various journal papers and internet sources

Target group of students

Civil Engineering

Group size

3-6

Special requirements

BOM355

Suggestion from

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Can the project be duplicated?

Yes

If any of the following aspects to be integrated

Digitalization

Sustainability

Climate change

Gender equality, equal treatment and diversity

Other