

THE RYFAST PROJECT

Stavanger, Norway

The Ryfast Project comprises the construction of two subsea tunnels and a city tunnel under the fjord in the west coast of Norway: the Solbakk tunnel, the Hundvåg tunnel and the Eiganes tunnel, being part of the national coastal highway E39 reaching the north part of Norway.

Together with the tunnels of the Rogfast Project, located in the same region, they will represent the longest and deepest subsea road tunnels in the world among other new records to be established once constructed.



Foto: Øyvind Ellingsen/Statens vegvesen

Objective

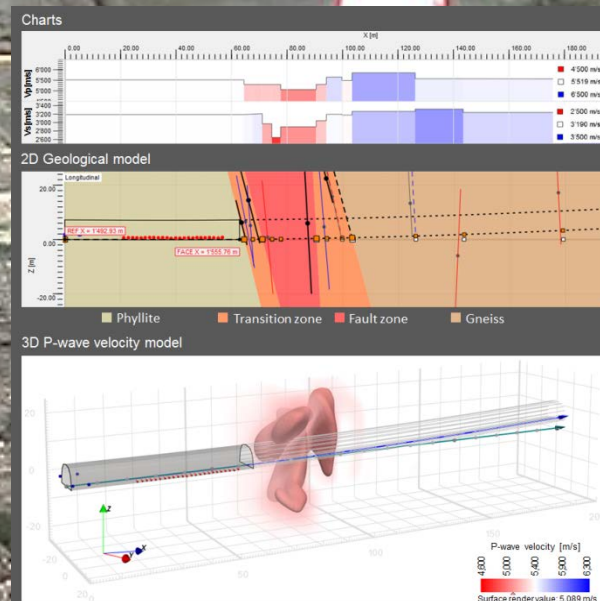
- Long-range geological prediction ahead of the face while excavation as complementary tool to probe drill exploration
- Estimation of seismic wave velocities and geomechanical parameters of the rock mass
- 3D geological model

Our Service

Two seismic measurements at the Hundvåg tunnel (tube 222) at both headings covering up to 274 m as total prediction range.

System used

- Amberg TSP 303 Plus



Ryfast Project - Hundvåg tunnel

Location

Stavanger, Norway

General Information

Length in total	23.5 km
Solbakk	14.3 km
Hundvåg	5.5 km
Eiganes	3.7 km

Max. overburden under sea	
Solbakk	290 m.a.s.l.
Hundvåg	95 m.a.s.l.
Eiganes	city

Excavation method	Drill & Blast
-------------------	---------------

TSP seismic investigations

Number of surveys	2
Shots per survey	24
Receivers per survey	4
Prediction range (metres)	142 / 132
Time needed (hours)	2 ½ / 2

Contractors

Kruse Smith AS / Risa

Client and Contact Person

Statens vegvesen, Gunnar Eitjorð
(Project Director)



Amberg Technologies Ltd.
Trockenloosstrasse 21
CH-8105 Regensdorf

info@amberg.ch, www.amberg.ch/at