

Hyb-Wall / Hyb-Neo

(reinforced soil walls with improved soil and geogrids)

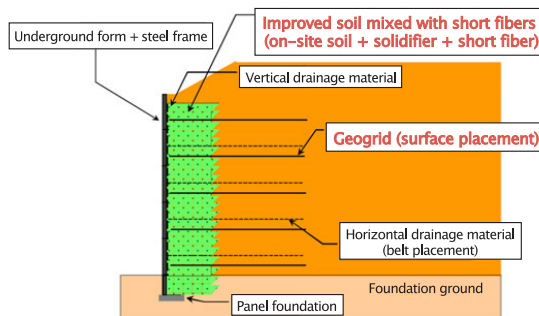
Overview

In response to demand for steep embankment slopes supporting effective land use, earth reinforcement with greater economy than retaining wall construction and other approaches is today increasingly applied. The Hyb-Wall technique involves the installation of novel reinforced soil walls with highly strengthened improved soil (known as geogrids). Hyb-Neo is an improved version of the genre with even better workability based on a wall surface material made from thin, lightweight precast panels and steel frames.

The basic patents for Hyb-Wall technology were issued in July 1995 and January 2010, and technical review certification No. 1207 for civil engineering materials was granted by the Public Works Research Center in November 2000 (renewed in 2005 and 2010: technical review certification No. 0507). Hyb-Neo is also registered with NETIS (HK-180020-A).



Hyb-Wall



Hyb-Neo



Technical review certificate

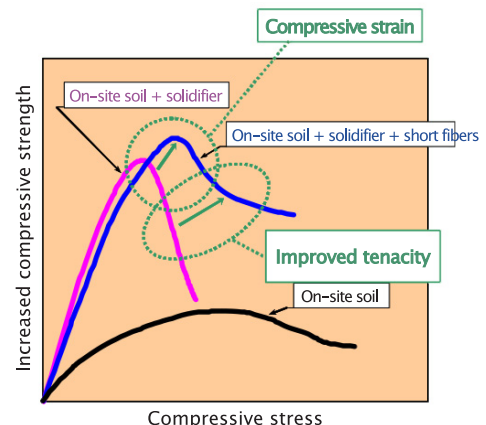
Advantages

Hyb-Wall and Hyb-Neo provide the following advantages with improved soil used for a certain wall width and related minimization of soil pressure on wall panels:

- ◆ Construction cost reduction
- ◆ Applicability to cohesive, gravelly and other soil types
- ◆ Reduction of excess soil via application of on-site material
- ◆ Simple wall panel design, efficient construction and optimized design
- ◆ Capacity for mixer usage to support improved-soil quality
- ◆ Greater tenacity via combination with solidifier and short fibers to soil generated on site for improved seismic stability



Short fibers



Strength properties of soil mixed with short fibers

Construction procedures

① Panel foundation construction



② Panel piling/connection



③ Improved-soil mixing



④ Rollout



⑤ Compaction



⑥ Geogrid installation



Application

◆As of June 2019: 4 cases of test construction and 63 cases of actual construction



Earth retaining for a bridge abutment



Road widening: 5% gradient



Road widening



Road



Development



Road

Test field construction, Kanazawa Construction Office, Hokuriku Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism

June 2020

Related documents: Hyb-Wall method brochure, design/construction manual, quantity survey document (draft), construction technology review and certification report (November 2015, Public Works Research Center)
Hyb-Neo brochure, design/construction manual, quantity survey document (draft)

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