

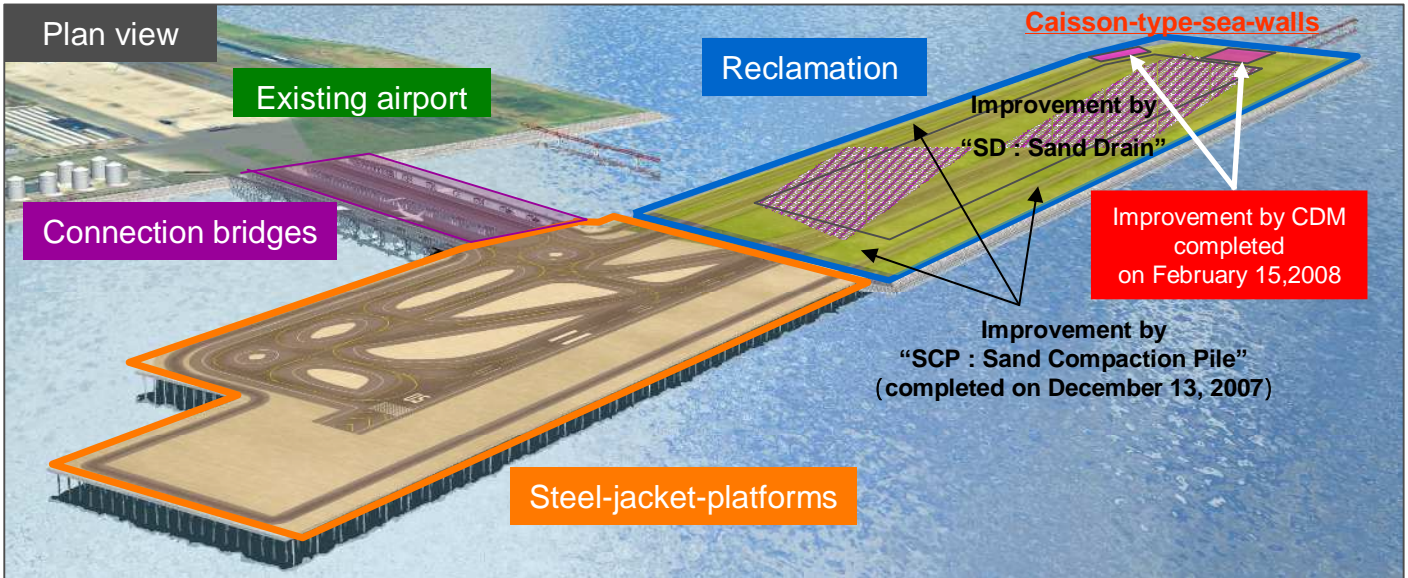
# D-runway News Letter (No.1)

February 20, 2008

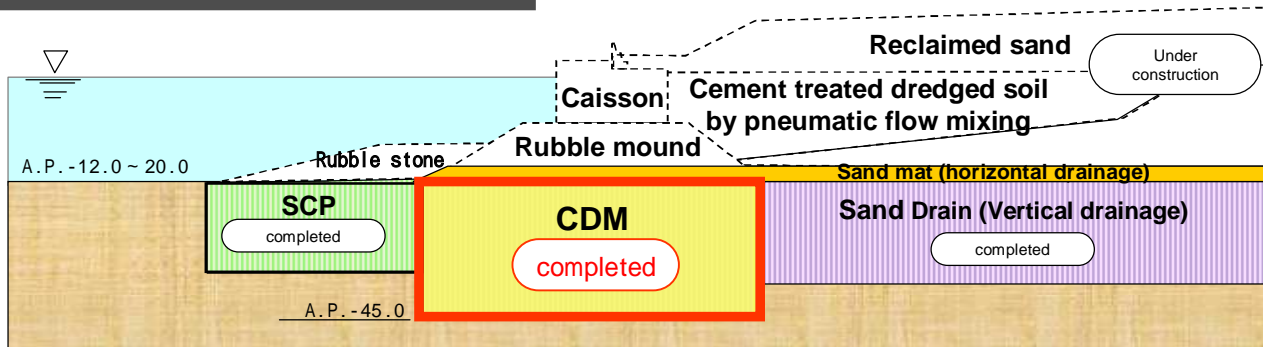
国土交通省 関東地方整備局  
 Ministry of Land, Infrastructure, Transport and Tourism, Kanto Regional Development Bureau  
<http://www.pa.ktr.mlit.go.jp/haneda>

## CDM (Cement Deep Mixing Method) was applied to seabed soil improvement in the "HANEDA D-runway construction project".

- The new D-runway of the HANEDA airport, under construction, is composed of three structural types, which are (1) reclaimed land, (2) steel-jacket-platforms of piers and (3) connection bridges for taxiways.
- CDM method was applied to seabed soil improvement of the foundation of caisson-type-sea-walls.
- In the end of September 2007, soil improvement works by CDM were started, and after 5 months of 24-hours improvement works, on February 15, 2008, CDM works were completed safely and surely.
- A total of 4,524 cement-treated-piles, which lead to a improved soil volume of about 620,000m<sup>3</sup>, were constructed in seabed soil of marine clay, down to A.P.-45m from sea bottom.



### Cross section of caisson-type-sea-walls



### CDM working vessels

The 4 CDM working vessels (photos below) really did a good job, everyday and night for 5 months!



POCM No.2 (PENTA)



POCM No.10 (PENTA)



DECM No.7 (TOA)



DCM No.3 (TOYO)

CDM method, often used in Japan, is one of seabed soil improvement methods, especially for soft clay. It improves soft seabed marine clay as a rigid foundation by mixing soils with cement directly. In the D-runway project, CDM is applied to the foundation of caisson-type-sea-walls to avoid residual settlements.