



# CARGO VILLAGE PROJECT – CONSTRUCTION OF APRON & TAXIWAYS CARGO VILLAGE SOEKARNO HATTA INTERNATIONAL AIRPORT – INDONESIA PREFABRICATED VERTICAL DRAINS (PVD) AND CONTROLLED MODULUS COLUMNS (CMC)

Category: Airport, aprons taxiways, logistics  
Developer: PT Angkasa Pura II  
Contractor: PT. Adhi Karya (Persero)  
Area /  
Quantity: 124,000 m<sup>2</sup>  
Year: 2017



## PROJECT DESCRIPTION

### Project Situation:

Construction of apron and taxiway cargo village inside Soekarno – Hatta international airport environment to accommodate the escalation of international and domestic cargo activities (freight forwarder). Menard will be in charge of PVD and CMC installation as ground improvement method. The jobsite itself will be categorized into 16 sub-zones based on soil investigation results.

### Scope of works:

- Organize Soil Investigations and design the ground improvement for the main contractor.
- Perform PVD in the beginning as the first step. Short CMC will be implemented after 1 week of PVD and will be completed by long CMC after 1 month of short CMC.
- Provide to the Main Contractor PLT (Plate Load Test) – testing method for CMC.
- Install and provide settlement plate, piezometer, stand pipe and settlement gauge to monitor the function of PVD.

## SOIL CONDITION / GEOTECHNICAL PROBLEM

Ground conditions were not uniform from one area to another. Overall, ground was composed of soft clays with a hard layer located between 10 and 23 m. There is existing swampy area inside the jobsite about 25,000 m<sup>2</sup>.

## MENARD SOLUTION

### Objectives:

- Perform PVD close to under construction taxiway (1 spot of PKPPBSH project) with 50 tons capacity excavator.
- Perform CMC close to under construction taxiway (1 spot of PKPPBSH project) with 25m high equipment
- Jobs can be implemented on 24 hours based/day but still with strict aviation safety regulation.



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Keys figures:

- Surface treated: 124,000 m<sup>2</sup>
- 33,734 CMC
- 33,694 PVD
- Spot quantity: 16 areas
- Depth of CMC: between 10 and 23.4 m depth
- Depth of PVD: between 5 and 23 m depth

