

## Optimal foundation for a phenol processing plant

Dahej, Gujarat

Keller's engineering excellence and wide portfolio helped provide a mix of ground engineering techniques to suit different soil conditions and structural performance requirements. The selection of optimal foundation solution reduced the cost for the client and enabled early completion of the project.



### The project

Deepak Phenolics LTD (DPL) was constructing a phenol processing plant at Dahej, Gujar. Keller was commissioned by DPL to design and construct ground improvement works for the mounded storage vessels and storage tanks, and heavy foundation works to support other heavy plant structures.

### The challenge

The main challenges with the project were to meet technical specifications in silty and clayey subsoil strata and effectively utilise resources whilst working in collaboration with other contractors.

## The solution

Keller provided an alternative to client's proposal of a complete piling solution that combined vibro stone columns to support the mounded storage vessels and storage tanks and bored piles for the chimney, boiler and other processing structures. To keep post construction settlement (total and differential) within tolerable limits, the treatment area of the mounds was preloaded. This optimised foundation solution saved significant cost and time. For the convenience of the client, Keller also delivered foundation civil works.

## Project facts

### Owner(s)

Deepak Phenolics Ltd

### Keller business unit(s)

Keller India

### Main contractor(s)

Keller Ground Engineering India Pvt Ltd

### Engineer(s)

Thyssenkrupp

### Solutions

Bearing capacity / settlement control  
Liquefaction mitigation

### Markets

Industrial and manufacturing

### Techniques

Bored piles  
Vibro stone columns