

H2M CHANNEL PROJECT REPORT



*II LAKE MEAD INTAKE NO. 3 - RISER STRUCTURE
CLARK COUNTY, NEVADA*

Lake Mead is the largest reservoir in the United States in maximum water capacity, but changing precipitation patterns, evaporation and current water use rates are putting pressure on the average water level, leading to the construction of a third deep water intake system to assure Las Vegas' drinking water supply.

Infrastructure for the \$700 million project contracted to Vegas Tunnel Constructors includes a stainless steel and concrete intake riser and TBM reception port fixed to the lake floor, and a 3 mile intake tunnel under the lake bed with a TBM access shaft and chamber located on Saddle Island.

VTC retained Halfen USA to supply stainless steel adjustable pipe supports to carry titanium and HDPE sampling and dosing pipes. The brief was to provide an off-the-shelf solution which permitted simple and rapid site connection of unwieldy elements, designed and fabricated in different locations.



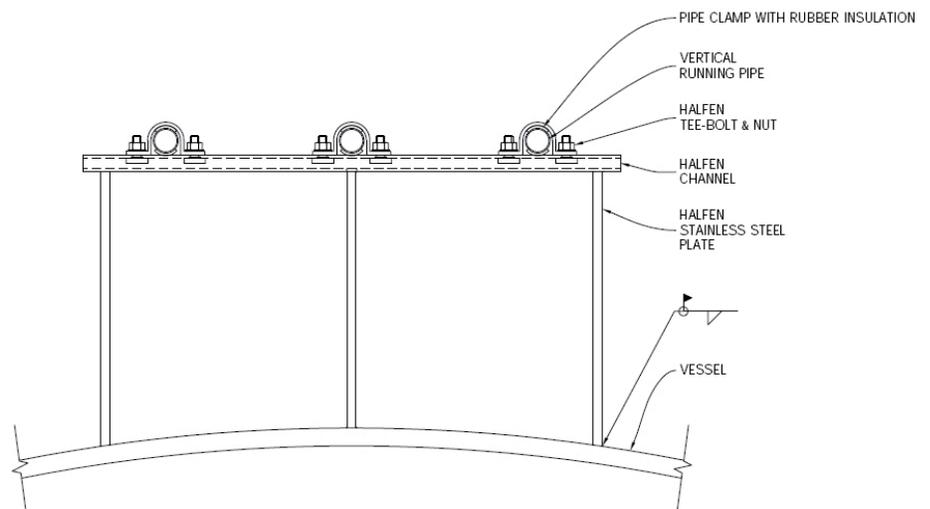
- **Owner:**
Southern Nevada Water Authority
- **General Contractor:**
Vegas Tunnel Constructors
(a joint venture of S.A. Healy Co. and Impregilo S.p.A.)
- **Consultant:**
Arup
- **Material:**
HZM 3823 toothed channel
A4 (316) stainless with matching
toothed bolts.



Courtesy of VTC

Here the riser being prepared for submersion. Halfen supports can be seen in the center. Shown on the previous page, submersion underway. Over 1000 concrete trucks were carried on barges to a position on the lake surface over the intake riser. View video footage of concrete placement for the third intake structure, which was completed 2 ½ miles offshore over a period of 12 days in March of 2012 at <http://www.snwa.com/apps/video/index.cfm?cid=36&vid=1000>

Toothed, hot-rolled channel provides positive load transfer in three planes and excellent resistance to dynamic loads. In this application support frames using the same material were used to carry both horizontal (tangential orientation) and vertical (parallel) pipes as they followed the curvature of the riser.



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