



Product Hilites

Load Cells Used In Concrete Form Monitoring System



At the heart of many construction projects is a rebar-reinforced concrete structure holding it up. Support columns and walls begin as rebar 'skeletons' around which the concrete is poured. Wood or fiberglass forms are built around the rebar framework and concrete is poured into the cavity. The forms hold the concrete in place until it hardens, then are removed.

A typical pour can take 8 hours to complete and safety concerns dictate that the concrete be introduced slowly to give it time to set up and become self supporting before more is added. Adding too much concrete too quickly could result in the forms failing under the weight.

A construction company specializing in concrete structures came to Stellar with this unique application challenge. They wanted a system that would accurately monitor the force exerted by the concrete on the form so they could regulate the dispensing of the concrete. The goal for them was to pour the concrete as quickly as possible, yet without exceeding the strength ratings of the 20-foot tall form and creating an unsafe situation.

Stellar Engineers proposed a system using Model PNC compression load cells to provide real time data during the pouring operation. The 50,000 lb. pancake-style load cells integrate with the existing form-slip rods which help to hold the walls of the structure in place. Multiple load cells are spaced around the form and are pre-tensioned to synchronize the output before they begin the pour. To insure reliable performance in this industrial environment, the load cells feature a heavy-duty mil spec connector and armored cable leading to a NEMA-4 digital meter.

This load cell 'Application-Solution' from Stellar Technology improves safety on the job site, and saves time and money too.

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