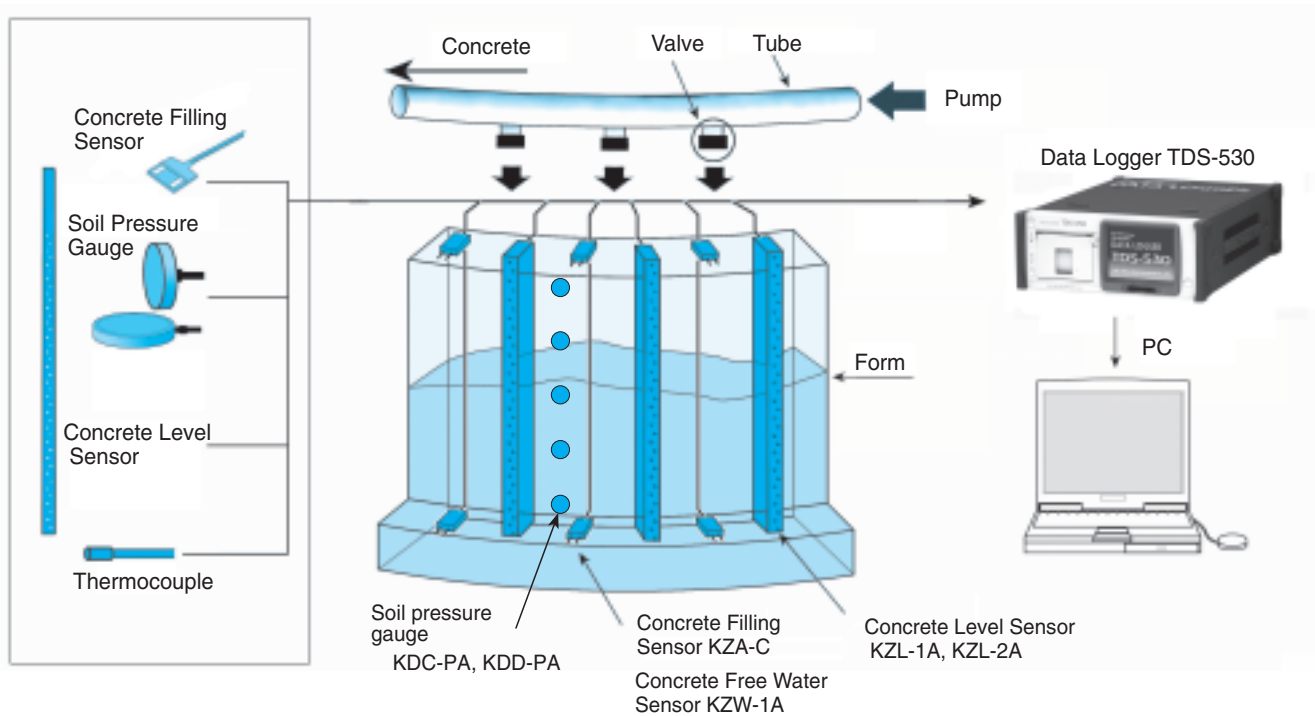
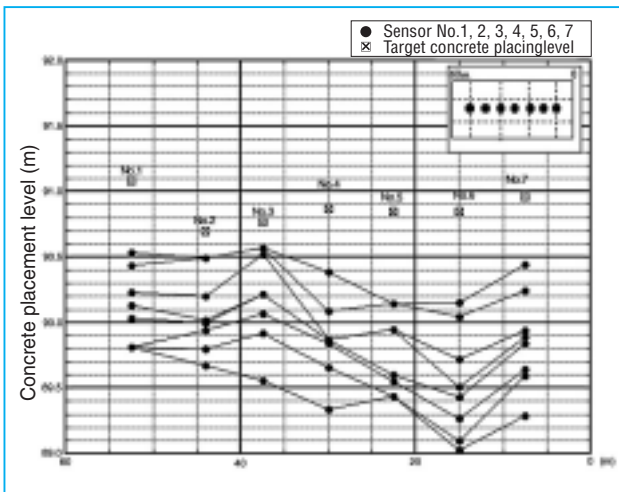


11 Construction Management Measurement Based on The Status of Concrete

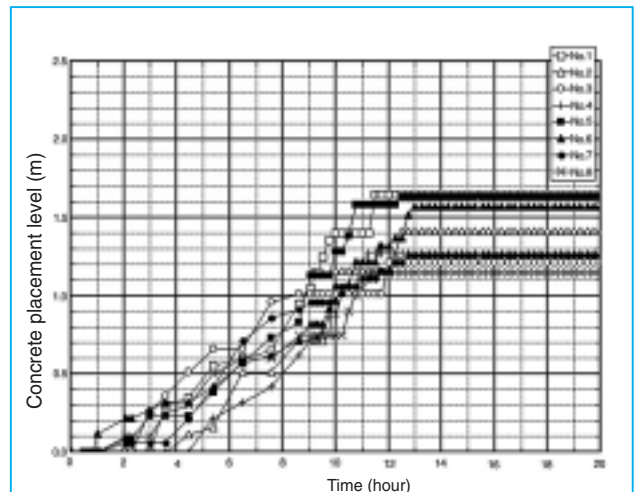
With the spread of an excellent self-filling and high fluid concrete, a method of concrete being placed in the form directly has been frequently used. When concrete is filled in a narrow space or complicated shaped form, it is very difficult to visually observe the filling status of concrete. Here, we suggest a concrete filling management system for observing the condition of concrete placement.



Distribution graph of concrete placement level



A graph of concrete level vs. time



A list of Measuring Instruments

Measurement Items	Instruments	Type
Concrete placement level	Concrete level sensor	KZL-A
Concrete filling status	Concrete filling sensor	KZA-C
Side pressure of form	Soil pressure gauge	KDC-PA, KDD-PA
Pumping pressure	Flash diaphragm type pressure transducer	PWF-PA
Concrete temperature	Temperature gauge (thermocouple)	T, KT-A
	Concrete free water sensor	KZW-1A