



In-situ concrete

In-situ concrete works cover all concrete work performed on site except the assembly of precast elements. Precast concrete assembly includes all assembly activities, as well as casting joints. Overlays on precast elements are not part of the assembly process for precast concrete, and come under in-situ concrete works. The installation of floor slabs ("plattendekker") is treated as formwork under in-situ concrete works. The installation double/twin walls (e.g. of the type "Con-form") is considered precast concrete assembly, whereas pouring concrete (filling wall formwork) is defined as in-situ concrete works.

Certification Class	Name of Certification Class	Background/Prior experience	Necessary supplementary courses	Experience	Type of experience
UPK 3	Production and quality control manager, execution class 3	University, Engineering college, Vocational college (technical course relating to construction industry)	U3	2 yrs	Construction site experience in execution class 3
				3.5 yrs	3 years' experience in execution class 2 plus 6 months in execution class 3
UK	Quality control manager in all execution classes	University, Engineering college, Vocational college (technical course relating to construction industry)	U3	2 yrs	Work experience from a consulting engineering firm in all execution classes
	Supplementary course for quality control of prestressed concrete		U4		
	Supplementary course for quality control of precast concrete assembly		U5		
UPK2	Production and quality control manager, execution classes 1 and 2	University, Engineering college, Vocational college (technical course relating to construction industry)	U3	6 months	Construction site experience in all execution classes.
		Trade certificate or vocational training certificate relating to concrete work		None *)	
		Trade certificate or vocational training certificate from another area of construction (e.g. carpentry).		3 yrs	Construction site experience in all execution classes.
UFB	Foreman/tradesman ("bas") in all execution classes	University, Engineering college, Vocational college (technical course relating to construction industry)	U3	6 months	Construction site experience in all execution classes.
		Trade certificate or vocational training certificate relating to concrete work		None *)	
		Trade certificate or vocational training certificate from another area of construction (e.g. carpentry).		3 yrs	Construction site experience in all execution classes.
UPK3+S	Production and quality control manager for prestressed concrete	University, Engineering college, Vocational college (technical course relating to construction industry)	U3 and U4	2 yrs	Construction site experience in execution class 3
				3.5 yrs	3 years' experience in execution class 2 plus 6 months in execution class 3
UFB+S	Foreman/tradesman ("bas") for prestressed concrete	As for UFB	U3 and U4	UFB + 6 months	6 months' experience leading or executing working post-tensioned concrete

*) Covered by the educational qualifications



In the case of work involving prestressed concrete, CWA 14646-2003 establishes qualification requirements for post-tensioning site managers and quality control managers, post-tensioning foremen and installers. The Norwegian Council of Concrete Competence (BOR) does not issue competence certificates for these functions.