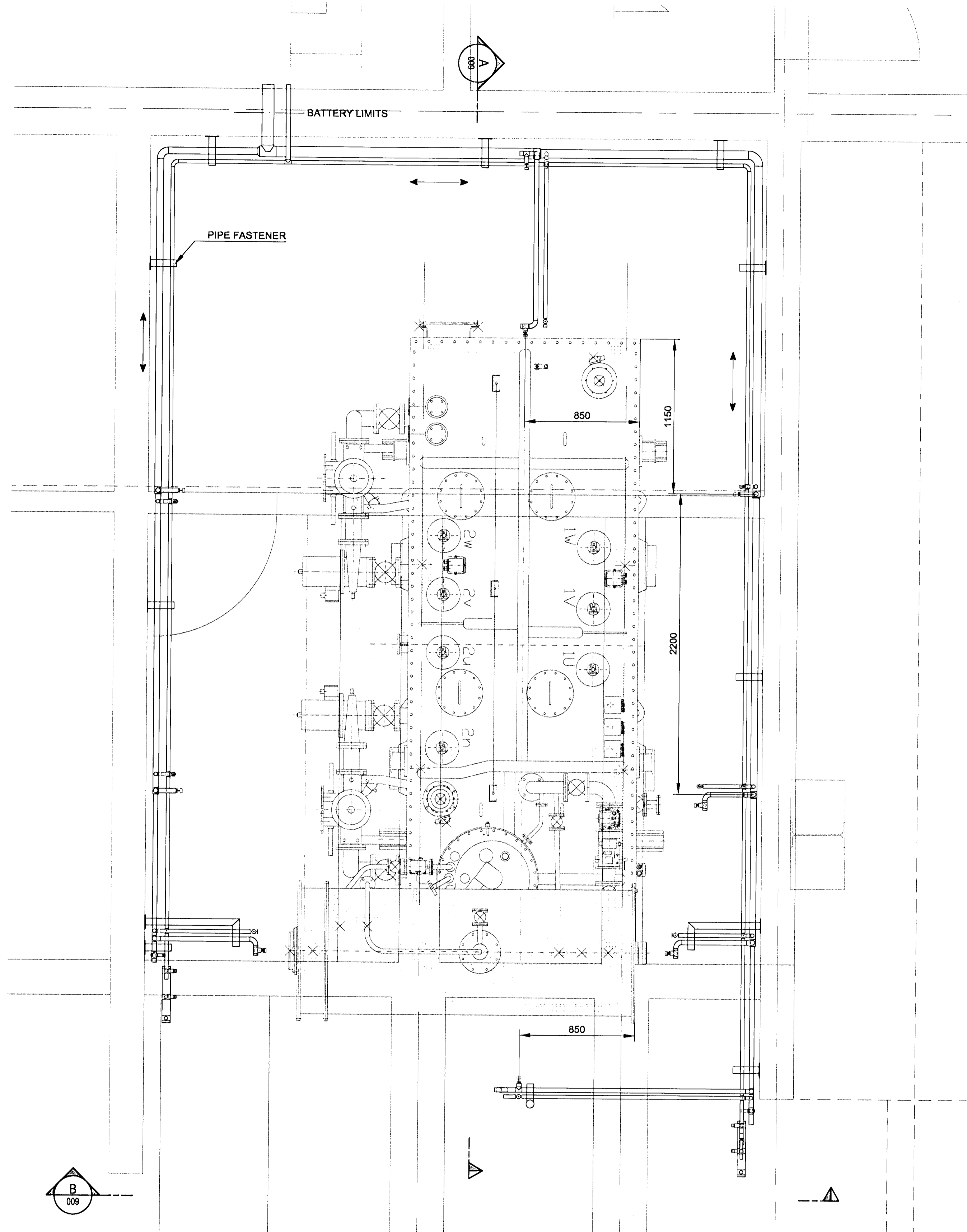


Nick Indriðason
N. 6



Equipment and Testing

All equipment that contractor provides shall be accepted by the Icelandic fire authorities (Brunamálastofnun) and listed by UL or FM. Contractor shall be licenced by the Icelandic fire authorities (Brunamálastofnun).

Pipes shall be acc. to DIN 2440, made of galvanized steel, material acc. to IST-EN 10025 or similar material that is approved by NFPA 13 and accepted by designer.

Pipe joints shall be acc. to IST-EN 10242, made of galvanized cast iron, material acc. to DIN 1692 or similar material that is approved by NFPA 13 and accepted by designer.

Sprinkler heads shall be listed for use in the appropriate hazard classes as shown on designer drawings. For installation of sprinklers and nozzles special tools must be used as detailed in installation manuals.

All parts of piping that can not be drained through the main drain valve shall be equipped with auxiliary drain valves in acc. with section 8.15.2.5 of NFPA13. Pipes in pilot line shall have a minimum slope of 2 mm/m.

All pipe hangers shall be listed for use in sprinkler systems. Maximum distance between hangers shall be 3,6 m for DN25 and DN32 pipes and 4,5 m for other pipes.

Couplings for pipes DN65 and larger shall be rigid, except for following cases:

- 1.) Within 600 mm of the top and bottom of all risers unless the following provisions are met:
 - a) In risers less than 900 mm in length, flexible couplings can be omitted.
 - b) In risers 0,9 m to 2,1 m in length, one flexible coupling is adequate.
- 2.) Within 0,3 m above and 0,6 m below any floor in a multistory building.
- 3.) On both sides of concrete or masonry walls within 0,3 of the wall surface, unless the following conditions are met:

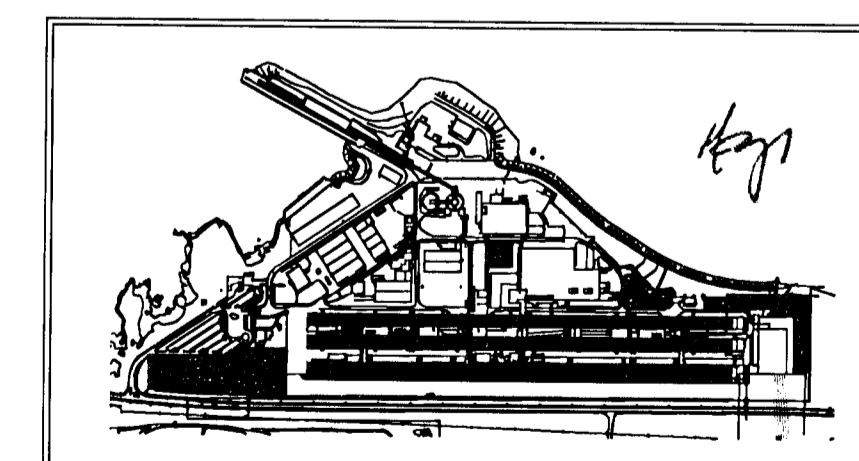
Diameter of holes through walls shall be 50 mm larger than the pipe for sizes DN25 through DN90, and 100 mm larger for pipes DN 100 and bigger.

Earthquake braces shall be accepted by the Icelandic fire authorities and listed by UL or FM. Pipe stands shall be fastened acc. to NFPA rules.

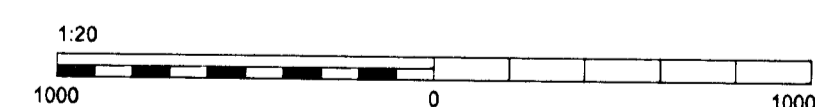
Pilot line shall be additionally tested with 2,8 bar air pressure for 24 hours. Any leakage that results in a loss of pressure in excess of 0,1 bar for the 24 hours shall be corrected. Pressure testing shall be done with sprinklers installed in the system.

Equipment marked with system numbers shall be marked with permanent markings and letters shall be at least 10mm high. These markings shall be permanently attached to the appropriate equipment in a manner accepted by designer.

Contractor shall install markings in acc. with checklist F from the Icelandic Fire Authorities (Brunamálastofnun).

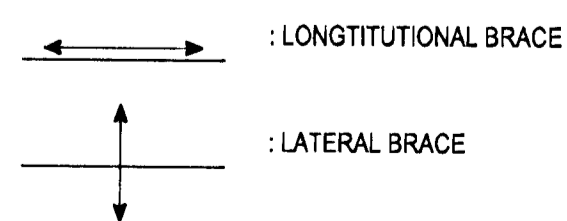


IPU Keyplan - Scale: 1:15000



Skýringar:
Legend: The system is designed in accordance to NFPA 15 Standard for Water Spray Fixed Systems for Fire Protection. Design density in 10 mm/min/m² in acc to NFPA 15 section 7.4.4.3. The system is fully hydraulically calculated, calculations are done with FHC hydraulic calculations program. Water demand is 550l/min at 2,3 bars at connection. The system is connected to a central alarm station.

EARTHQUAKE BRACES:



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Slg nr / Rev no	Description	Depositing Date	Rev / Rev no	Yfir / Yfir	Notk heim / Notk heim	Notk heim / Notk heim
2	ISSUED FOR CONSTRUCTION	2011.12.08	PB			
1	ISSUED FOR REVIEW	2011.10.24	SjÞ			

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Dagsetning / Date	2011.10.24
Hannað / Designed	SjÞ
Verktaki / Supplier	HRV
Tekn.nr.verktaka / Supplier drw.no.	IDP-411-K2-092-007
Samþykkt / Approved	Yfir / Chkd
Húti of / Part of:	BJ

IPU 410 - SUBSTATION SPRINKLER SYSTEM 01 GENERAL LAYOUT		Flokkur nr. / Búð nr. / Nasta bl.nr.:
TRANSFORM BAYS		Kostn.nr.-Cno. / Bcn.nr.-Eqno
		AKS
ISAL Tekn.nr. ISAL / Drw.no. of ISAL		Breyt./Rev. C
ISAL Yfirráð og síðst. degt / ISAL Checked, date		ISAL Samþykkt, degt / ISAL Approved, date