

NORSOK STANDARD

SYSTEM REQUIREMENTS
FLARE, VENT AND BLOWDOWN
SYSTEM NO. 43

P-SR-007
Rev. 1, December 1994

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1. FOREWORD

This standard has been developed by the NORSOK Standardisation Work Group.

2. SCOPE

3. NORMATIVE REFERENCES

NORSOK Standard

P-CR-001

Process Design

S-DP-001

Technical Safety.

4. DEFINITIONS AND ABBREVIATIONS

4.1 Definitions

4.2 Abbreviations

5. FUNCTIONAL REQUIREMENTS

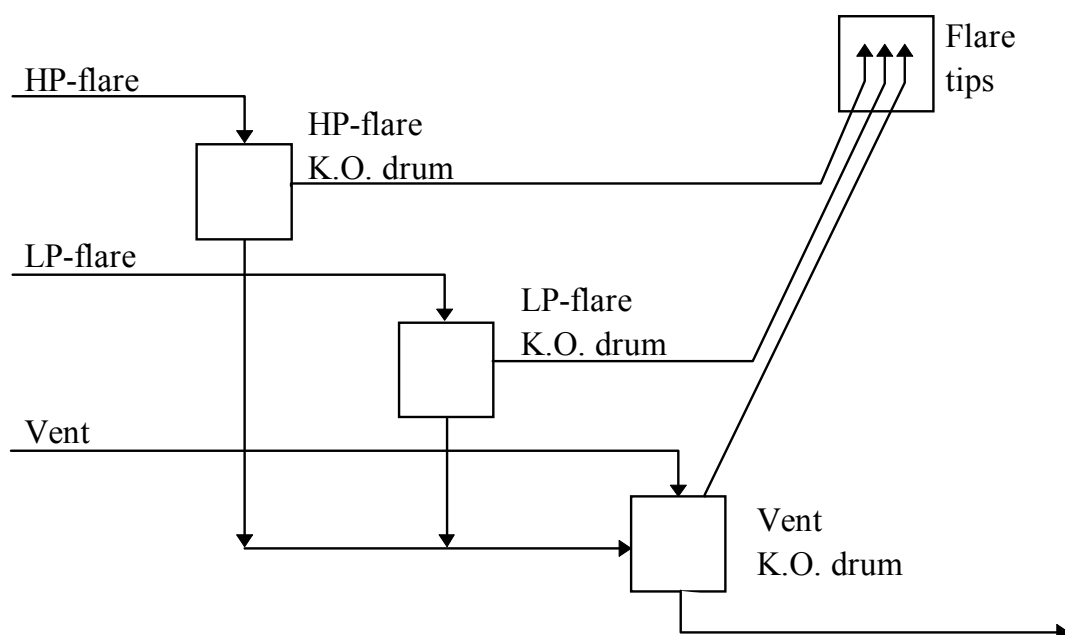
5.1 General

Discharge and disposal of gases and liquids during emergency depressurization, process upsets, system and equipment failure, depressurization for maintenance and operation and purging of tanks and vessels.

5.2 Products/Services

Not Applicable.

5.3 Equipment/Schematic



5.4 Performance

	HP	LP	Vent
System Capacity :			
Source discharge pressure (barg) :			ATM
Knock-out drum pressure (barg) :			ATM
Knock-out droplet size (micron) :	<400 ^{*)}	<300	<300

^{*)} For subsonic flare, 300 micron shall be used.

5.5 Regularity

5.5.1 Regularity

99 %.

5.5.2 Sparing

HP, LP and Vent, as required. No Sparing.

5.6 Process/Ambient Conditions

Not Applicable.

5.7 Operational Requirements

5.7.1 Control and Monitoring

System performance shall be controlled and monitored from CCR as shown below:

OS/VDU Functions	P	T	L	F	A	Other
Knock-out Vessel	M	M ¹⁾	C ¹⁾		X ¹⁾	¹⁾ Low temperature and liquid level
Flare Meter				X		DAS
Flare Tip Pilots					X ²⁾	Pilots extinguished

P = Pressure, T = Temperature, L = Level, F = Flow, A = Alarm,
M = Monitoring, C = Control, X=Alarm available as required

5.7.2 Measurements

Systems shall be equipped with flow devices located downstream knock-out drums continuously measuring the rates of fluids being flared. The rates shall be available on above OS VDU picture and as input to Data Acquisition System (DAS).

5.7.3 Pilot Ignition Generators

Functionality shall be proven under all operating conditions.

5.8 Maintenance Requirements

5.8.1 Access

All instrumentation shall be located and available for testing, repair and replacement without production shutdown, except instrumentation at flare tip. Ladders and platform for access to flare tips shall be provided.

5.9 Isolation and Sectioning

5.9.1 Valves

Block valves shall be installed downstream blowdown valves and upstream and downstream safety relief valves.

5.10 Layout Requirements

5.10.1 Piping

To slope towards knock-out drums and no pocket allowed.

5.10.2 Insulation

Not required on knock-out vessel

5.11 Interface Requirements

5.11.1 Power

Vessels shall be fitted with heaters to prevent liquids from freezing.

5.11.2 Nitrogen

Each system shall be continuously purged with nitrogen supplied upstream in headers and sub-headers.

5.11.3 Pilots

Each flare tip shall be equipped with pilot burners. Alternative backup source provided. Provision shall be made for use of propane bottles.

5.11.4 Methanol

Shall be considered to prevent blockage by hydrates.

5.12 Commissioning Requirements

Spectacle blinds shall be provided as required to perform leak testing of system, excluding flare stack piping from knock-out drum outlets.