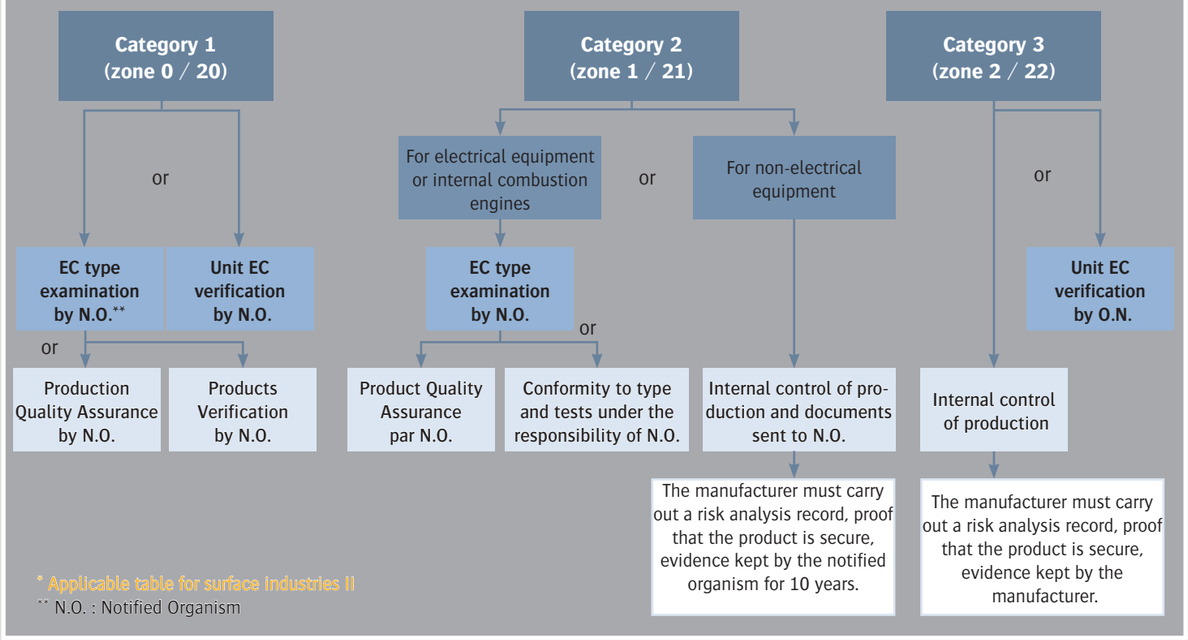
ATEX Guide for design of compliant equipment

EQUIPMENT FOR SURFACE INDUSTRIES (GROUP II)

Zone	0	20	1	21	2	22
Type of atmosphere	G gas	D dust	G gas	D dust	G gas	D dust
Explosive atmosphere	Permanent presence		Intermittent presence		Episodic presence	
Category of devices that may be used in accordance with 94/9/CE	1		2		3	

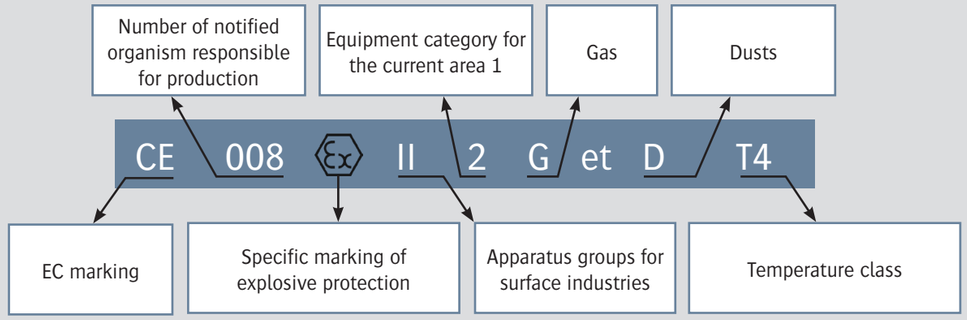
CONFORMITY ASSESSMENT PROCEDURE*



* Applicable table for surface industries II

** N.O. : Notified Organism

PRODUCT MARKING



GAS GROUPS

Group	Reference gas	MESG (mm)	MIC (mj)
I	Methane	1,14	0,28
IIA	Propane	0,92	0,25
IIB	Ethylene	0,65	0,07
IIC	Hydrogen/acetylene	0,37	1,011/0,017

MESG: Maximum Experimental Safe Gap

MIC: Minimum Ignition Current

For flame arresters, additional subdivisions IIB1, IIB2 et IIB3

IIB1: MESG > 0,85

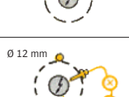
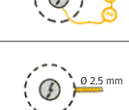
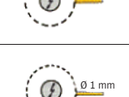
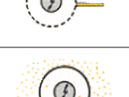
IIB2: MESG > 0,75

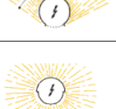
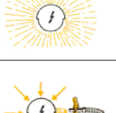
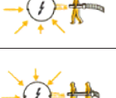
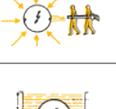
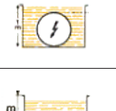
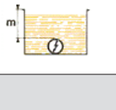
IIB3: MESG > 0,65

DUST GROUPS

Group	Type of dust	Size	Resistivity
IIIA	Suspended combustible particles	> 500 µm	-
IIIB	Non-conductive dusts	⩽ 500 µm	$>10^3$ Ω.m
IIIC	Conductive dusts	⩽ 500 µm	$\leqslant 10^3$ Ω.m

DEGREE OF PROTECTION IP«XX»

	Protection against solid bodies	
0		No protection
1		Protected against solid bodies ≥50 mm (eg accidental contact of the hand)
2		Protected against solid bodies ≥12 mm (eg fingers of the hand)
3		Protected against solid bodies ≥2,5mm (eg screw tools...)
4		Protected against solid bodies ≥1 mm (eg fine tools, small cord)
5		Protected against dust (no harmful sediment)
6		Totally protected against dust

	Protection against liquid bodies	
0		No protection
1		Protected against vertically falling water drops
2		Protected against water falls inclined at 15 °
3		Protected against rain water up to 60 ° from the vertical
4		Protected against water sprayed from all directions
5		Protected against water jets with lance from all directions
6		Protected against water splashes comparable to heavy seas
7		Protected against the effects of immersion
8		Protected against the effects of prolonged immersion under specified conditions

MAXIMUM SURFACE TEMPERATURES

Gas	T1 (450)	T2 (300)	T3 (200)	T4 (135)	T5 (100)	T6 (85)
Dust	450	300	200	135	100	85

GROUPE FIDEIP

Palamatic PROCESS >>> machines • engineering