

Tabella 1 – Determinazione delle classi di esecuzione secondo UNI EN 1993-1-1:2005/A1:2014 (tab. C.1 Appendice C)

Classi di Affidabilità (RC) o Classi di Conseguenze (CC)	Tipo di carico	
	Quasi-statico e/o classe di duttilità sismica DCL (¹)	Soggette a fatica (²) e/o classe di duttilità sismica DCM o DCH (¹)
RC3 o CC3	EXC3(³)	EXC3(³)
RC2 o CC2	EXC2	EXC3
RC1 o CC1	EXC1	EXC2

(¹) Classi di duttilità definite in EN 1998-1; DCL=bassa, DCM=media, DCH=alta.
(²) Vedi EN 1993-1-9.
(³) Per strutture nelle quali il superamento degli stati limite di servizio ed ultimi porti a conseguenze giudicate particolarmente onerose, può essere specificata la classe EXC4.

Table L.1 — Guidance on a method for selection of weld inspection class

Level of fatigue utilization ^a	Consequences from failure of joint or component ^c	Stress in weld ^b	Weld Inspection Class (WIC)
High fatigue utilization	Substantial ^b	Welds with the direction of dynamic principal stress transverse to the weld (between 45° and 135°)	WIC5
		Welds with the direction of dynamic principal stress in the direction of the weld (between -45° and +45°)	WIC4
	Not substantial ^c	Welds with the direction of dynamic principal stress transverse to the weld (between 45° and 135°)	WIC3
		Welds with the direction of dynamic principal stress in the direction of the weld (between -45° and +45°)	WIC2
No fatigue (i.e. quasi-static) or Low fatigue utilization	Substantial ^b	Welds with high ^d tensile stresses transverse to weld	WIC5
		Welds with low tensile stresses transverse to weld and/or high ^d shear stresses	WIC4
	Not substantial ^c	For welds in EXC3 or EXC4 with high ^d tensile stresses transverse to weld	WIC3
		All other load-bearing welds except welds in EXC1	WIC2
		Welds in EXC1 and non-load-bearing welds	WIC1

^a Low fatigue utilization means connection with calculated fatigue life longer than 4 times the required fatigue life.

^b Substantial consequences means that the failure of the joint or member will entail:

- possible multiple loss of human life; and/or;
- significant pollution; and/or;
- major financial consequences.

^c The consequences may be assessed as Not substantial if the structure has been provided with sufficient residual strength to meet specified accidental actions.

^d High stresses are those that (quasi-)static stresses that exceed 50 % of the welds tensile or shear capacity, as appropriate. Low stresses conversely. Special consideration should also be given to the selection of WIC where the principal stress is in the through-thickness direction of the parent material.

Table I.1 — Potential loss of preload from coatings/coating systems in combination with preloaded contact surfaces

Coating/coating system (See EN ISO 12944-5 for full system details)	System reference in EN ISO 12944-5	Potential loss of preload
Unpainted hot dip galvanizing according to EN ISO 1461	n/a Listed as a reference value	Loss of preload force $\leq 10\%$ Suitable in all preloaded bolted connections ^{a b}
Alkali metallic zinc silicate primer	n/a	Loss of preload force $\leq 10\%$
One layer 2 pack-EP or -PUR coating with Zn(R)	A 3.10	Suitable in all preloaded bolted connections ^{a b}
Multilayer 1 pack-PUR coating systems with Zn(R) <div style="border: 1px solid red; padding: 2px; width: fit-content; margin: 5px 0;">sp. 160 micron; C3</div> <div style="border: 1px solid red; padding: 2px; width: fit-content; margin: 5px 0;">sp. 180-240 micron; cat. C4</div>	A 3.11 A 4.13 A 4.14 A 4.15	Loss of preload force $\leq 30\%$. Suitable in Category A and D bolted connections according to EN 1993-1-8 that are preloaded for serviceability reasons (e.g. durability or deformation minimization)
PVC/PVC-combined coatings with any thickness AK-coatings or AY-Hydro-coatings with thicknesses of more than 120 μm	n/a	Loss of preload force $> 30\%$. Not suitable for components in preloaded connections

1 mano per cat. C3
spessore 60 micron

^a Suitability for friction surfaces see Table 17

^b In Category B, C and E bolted connections according to EN 1993-1-8 it may be necessary to conduct the structural design with $0,9 F_{p,C}$ or (in case of the torque method) to specify preloads and bolting assemblies that can be re-tightened after a couple of days