

RCC-MRx

DESIGN AND CONSTRUCTION RULES FOR MECHANICAL COMPONENTS OF NUCLEAR INSTALLATIONS

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afcen

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Table A6.2610: criteria RB 3280 which must be complied with

RB 3280 critria	Stress	Allowable limits	Non standardized bolting elements or nut height < 0.8 d	Standardized bolting elements using nuts with a usual height ($h \geq 0.8 d$)					
				$R_{p0.2}$ parts = $R_{p0.2}$ screw		$R_{p0.2}$ parts > $R_{p0.2}$ screw		$R_{p0.2}$ parts < $R_{p0.2}$ screw	
				Bolts – Tie-rods	Screw – studs	Bolts – Tie-rods	Screw – studs	Bolts – Tie-rods	Screw – studs
RB 3282.11	$(\overline{\sigma_m})_{\text{fictitious}}$	S_{mB}	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	$\overline{\sigma_m}$	$2S_{mB}$	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	$\overline{\sigma_m + \Phi \sigma_b}$	$3S_{mB}$	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RB 3282.12	$(\tau_{fv})_{\text{fictitious}}$	$0.6.S_{mB}$	Yes	No	See note 1	No	See note 1	No	See note 2
	τ_{fv}	$1.2.S_{mB}$							
	$(\tau_{fp})_{\text{fictitious}}$	$0.3.S_m$							
	τ_{fp}	$0.6.S_m$							
	$(p_t)_{\text{fictitious}}$	$0.5.R_{p0.2}$	Yes	No	No	No	No	No	No
	p_t	$R_{p0.2}$		No	No	No	No	No	No
	$(\tau_t)_{\text{fictitious}}$	$0.6.S_{mB}$	Yes	No	No	No	No	No	No
	τ_t	$1.2.S_{mB}$							
	$(p_f)_{\text{fictitious}}$	$0.5.R_{p0.2}$	Yes	No	No	No	No	No	No
	p_f	$R_{p0.2}$							
RB 3283.11		Fatigue curve	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note 1: Compliance is not necessary if $L_e \geq 0.8 d$

Note 2: Only compliance with τ_{fp} is necessary. For information τ_{fp} must then be calculated with length L'_e (A6.5222)

The mechanical properties of the nuts fitted to bolts, tie-rods or studs must be at least equal to those of the threaded rod.