

**RANDACK FASTENERS INDIA PVT. LTD.**

Gat No 1197, Near Ghotawade Phata, Village Pirangut, Taluka Mulshi, Dist : Pune, 412108.

3.1 CERTIFICATE AS PER EN 10204

Customer: Randack Fasteners Americas.			T.C. No.: 2948		Date: 2017-02-13
PO No: 300032669 Rev dt 17.01.2017		Date: 2017-01-08	Part Description: STUD M36X581		
RFI CO No: EXP/16-17/00063		Date: 2017-01-13	Ref Std./Drawing No.: 103W1453P008 REV F		
Item Code: TPI 58249		Qty: 2000 Nos.	Material: 42CrMo4/10.9		

Chemical Composition :			Reference STD: DIN EN 10083-3 & GE Specs.P14A-AL-0220 Rev. C								Remark
Elements		Heat No.	C %	Si %	Mn %	P %	S %	Cr %	Mo %	P+S %	
Sr.No.	Batch Code	Min	0.38	0	0.6	0	0	0.9	0.15	0	
		Max	0.45	0.40	0.90	0.025	0.035	1.20	0.30		
1	EDY	K107921T2-1140	0.41	0.24	0.76	0.014	0.011	1.12	0.21	0.025	Passed
2	EED	K107920T4-1017	0.41	0.20	0.76	0.015	0.010	1.14	0.21	0.025	Passed
3	DFE	99302BU	0.41	0.21	0.77	0.009	0.008	1.00	0.19	0.017	Passed
4	DDX	98883BB	0.40	0.20	0.78	0.015	0.008	1.03	0.19	0.023	Passed
5	EEA	K108097T4-1018	0.42	0.25	0.78	0.013	0.008	1.15	0.22	0.021	Passed
6	EEC	K107920T3-1455	0.41	0.20	0.76	0.015	0.010	1.14	0.21	0.025	Passed




Mechanical Properties :					Reference STD: ISO 898-1 10.9 & GE Specs.P14A-AL-0220 Rev. C							
Parameters		Heat No.	0.2% Proof Stress (N/mm2)	U.T.S. (N/mm2)	Elongation (%)	Reduction (%)	Impact @ -40	Hardness				Remark
Sr.No.	Batch Code	Min	940	1040	9	48	27					
		Max		1170				375				
1	EDY	K107921T2-1140	1023.38	1082.14	15.46	57.38	58,52,64 Avg:58	Surface Core	345 340	336 335	350 335	Passed
2	EED	K107920T4-1017	1030.84	1127.27	16	54.93	48,52,42 Avg:47.33	Surface Core	365 350	369 352	363 352	
3	DFE	99302BU	1049.05	1140.05	14.46	54.98	28,28,30 Avg:28.67	Surface Core	359 352	360 355	362 355	Passed
4	DDX	98883BB	992.56	1091.2	13	54.44	30,32,30 Avg:30.67	Surface Core	342 340	346 340	358 348	Passed
5	EEA	K108097T4-1018	1009.42	1121.75	14.97	54.53	54,60,56 Avg:56.67	Surface Core	355 352	351 352	358 352	Passed
6	EEC	K107920T3-1455	968.51	1099.68	15	54.92	70,70,68 Avg:69.33	Surface Core	364 348	369 355	366 350	Passed

Non Metallic Inclusion Rating:			Reference STD : GE specs. P14A-AL-0220 Rev. C			
Sr.No.	Heat No.	Parameter	Required	Observation		Remark
1	K107921T2-1140	K3 as per DIN 50602	20 Max.	05		OK
2	K107920T4-1017	K3 as per DIN 50602	20 Max.	05		OK
3	99302BU	K3 as per DIN 50602	20 Max.	16		OK
4	98883BB	K3 as per DIN 50602	20 Max.	16		OK
5	K108097T4-1018	K3 as per DIN 50602	20 Max.	05		OK
6	K107920T3-1455	K3 as per DIN 50602	20 Max.	05		OK

MPI Details as per P28A-AL-0203:					
Sr.No.	Parameter	Required	Observation		Result
1	MPI Testing	As per MPI procedure No. RFI/MT/01 Rev. 05 approved by GE level III person	100% done (Before & after threading) & no recordable indication observed		OK

Delta Coating	Reference STD : GE specs. P14A-AL-0218 Rev. CL A
Refer attached coating certificate no:- 1) RFI/QA/9-16/743-C 2) RFI/QA/11-16/1172-A	

Other Details			Reference STD :103W1453 P008 Rev. F		
Sr.No.	Parameter	Required	Observation		Result
1	Thread Formation	By rolling after heat treatment	Threading done by rolling after heat treatment		OK
2	Dimensions	As per drawing	Refer Dimension Report Attached		OK
3	Identification	MFG code, Grade, Batch code & Yr. of MFG.	RFI 10.9 , EDY,EED,DFE,DDX,EEA,EEC & 16		OK

The results of tests are satisfactory.		
Prepared By,	Checked By,	Approved By,
		
Bhimrao Kulkarni Jr.Engineer - QA	Vishal Singh Asst.Manager-QA	Amit Petkar Manager Engineering