PROCESS QUALITY CONTROL SHEET - II

	ENDURANCE TECHNOLO	OCIES DVT I TD		CUSTOMER	ENDURANCE	SUPPLIER CODE	HELICAL SPRIN	NGS	
	ENDURANCE TECHNOLO	DGIES PVI.LID			ENDURANCE	REVISION DATE	13.11.19		
PART NAME	REBOUND SPRING (K55G)	PERSON IN CHARGE	Dy. General	Manager - Ope	rations	REVISION NO.	03		
PART NO. S2KH01502O CORE TEAM PKJ/ AA/ AW/ PS/ RK/ OP									
# PROTOTYPE # PRE LAUNCH # PRODUCTION #									

Doc.No;FT/QA/45										
Rev.No;00										
Date ;01.09.2012										
APPROVED BY	CHECKED BY	PREPARED BY								
PKJ	AW	RAJESH								

March Marc																	-	PKJ	AV		KAJESH
March Marc	PROCESS			CONTROL CHARACTERISTIC 3. WANDFACTORING CONDITION CONTROL										IIIIISTPAT	ION						
No. 1.00 1	NAME	OPN NO.	CHECK POINT	SPEC.	RESP.	INSPECTION TOOL	MEASURING FREQUENCY	RECORDING SHEET	SPECIAL Char. Class	Cp/Cpk Result (if Cp/Cpk result	RECORDING FREQUENCY	CHECK POINT	SPEC.	RESP.	METHOD	MEASURING FREQUENCY	RECORDING SHEET		ILLOUTKAT		
Marcian Company Comp	eiving Inspect	tion																			
Marcial 10 Marc		W	Vire Dia	ø3.40 ± 0.03	Inspector	DMM	Every Coil	HS06QFO0			Every Coil								Jan P	The street of	ni spiin
Secretary Secr	aw material	M	faterial	Grade- 3 as per IS 4454	Inspector	Supplier RMTC	Every Lot	HS06QFO0			Every Lot										
Procedure Proc	receiving	10 T	ensile Strength	183 Kgf/mm2 ~ 202 kgf	Inspector	Tensile Testing Machine	1 Coil per Heat	HS06QFO0			1 Coil per Heat										
No. Price		A	ppearance		Inspector	Visual	Every Coil	HS06QFO0			Every Coil										
March Marc	ina							1													
Output O	9	V	Vire Dia	ø3.40 ± 0.03	Inspector	MM	5 Pcs/ Setup & 3 Pcs/	HS06QFO0			5 Pcs/ Setup & 3 Pcs/ 4	Wire Guide	No Worn Out	Operator	Visual	2500000 Pcs	Tool history		100	40	
County C					·			3									card	-			2 hour
No. of Tide Collet 17% - 280		0	Outside Dia	18.50 ± 0.10	Inspector	VC	5 Pcs/ Setup & 3 Pcs/ 4 Hrs.	HS06QFO0 3			5 Pcs/ Setup & 3 Pcs/ 4 Hrs.	Rotary Cutter	No Worn Out	Operator	Visual	120000 Pcs			4	L	
Description of winding This Description of winding This Description of winding This Description of winding		N	lo. of Total Coils	3.75 ~ 3.80	Inspector	Visual Count.		HS06QFO0				Feed Roller	No Worn Out	Operator	Visual	2500000 Pcs		-	A		111
416. 20 416. 30 50 50 50 50 50 50 50								HS06OFO0										F PS	4. 1		7
Free Fergith 20.00 pt 2.02 (E. De 1) Interceptor VC Strug-Seley & SPUS 15000/CO Strug-Seley & SPUS Colored SP	Coiling	20 D	Pirection of winding	RH	Inspector	Visual		HS06QFO0 3				Wire Straightner	No Worn Out	Operator	Visual	2500000 Pcs	Tool history card	ory H. H. C.			-
Appearance App		F	ree length	20.30 ± 0.20 (E to B)	Inspector	vc	5 Pcs/ Setup & 3 Pcs/	HS06QFO0			5 Pcs/ Setup & 3 Pcs/ 4	Coiling pins	No Worn Out	No Worn Out	Visual	2500000 Pcs	Tool history			1	-
Company Comp		-		For a form by	la sa	Viewel		HS06QFQ1					No. We Co.	No Me O	VE 1	400000 B			A STATE OF	1	7
Back and Claring 0.1 Regarder Visual 5 Per State a 5 Per 1900/PCO1 1910/PCO1		Α	ppearance	edges & tool marks	inspector	visuai		3				mandril	No worn Out	NO Worn Out	visual	100000 Pcs	history				
		F	Back end Closing	0.1	Inspector	Visual		HS06QFO0									card				
Temporature 300° ± 10° Operator Tempo Controller Service							4 Hrs.				Hrs.										
Security	ss Relieving					-															
NONO Free Funds State S			emperature	300° ± 10°	Operator	Temp. controller	Every lot					Temp. Contriller	Calibration	QA Lab	Out sources	Once in a year	Calibration certificate				
	ess Relieving	30 T	ime Duration	30 Minutes	Operator	Timer	Every lot					Timer	Validation	QA Lab	Inhouse						E
Grinding Arigin 270°-330° Inspection 15 Pers Steps & 5 Pers H500GFC0 2 Pers 15 Pers Steps & 5 Pers H500GFC0 2 Pers 15 Pers Steps & 5 Pers H500GFC0 2 Pers 15 Pers Steps & 5 Pers H500GFC0 2 Pers 15 Pers Steps & 5 Pers H500GFC0 2 Pers 15 Pers Steps & 5 Pers H500GFC0 2 Pers 15 Pers Steps & 5 Pers H500GFC0 2 Pers 15 Pers Steps & 5 Pers H500GFC0 2 Pers 15 Pers Steps & 5 Pers H500GFC0 2 Pers 15 Pers Steps & 5 Pers H500GFC0 2 Pers 15 Pers Steps & 15 Pers H500GFC0 2 Pers 15 Pers Steps & 15 Pers H500GFC0 2 Pers 15 Pers Steps & 15 Pers H500GFC0 2 Pers 15 Pers Steps & 15 Pers H500GFC0 2 Pers 15 Pers Steps & 15 Pers H500GFC0 2 Pers H	INDING							3								validation	record				_
Common		G	Frinding Angle	270°~330°	Inspector/	Visual	5 Pcs/ Setup & 5 Pcs/	HS06QFO0				Grinding Wheel	mooth & Parelle	Operator	Wheel alignment block	During shift star	t	-		0.5	1
Stuaraness et Operator 2 Ms. 4																			The same of the sa		
Operator 2 His. 4 A A A A A A A A A		F	ree length	17.9 ± 0.20	Inspector/ Operator	VC	5 Pcs/ Setup & 5 Pcs/ 2 Hrs.					Wheel Dressing	smooth & Parelle	Operator	Visual	During setup				1	-
Parellelism e2		S	quareness e1	0.5mm Max.		RA & FG															E
Solid Height 14.3 mm Max Inspector LTM 2 Pest Setup 4 4	nd Grindina	40 P	arellelism e2	0.40mm MAX.	Inspector/	Dial	5 Pcs/ Setup & 5 Pcs/	HS06QFO0		1									4		A
A A A A A A A A A A	9		olid Height	14.3 mm Max.		LTM				1						1					
2 Hs. 4								4											100000		
visual defects Operator 2 Hrs. 4 OT PEENING Peening Time 15–20 Minutes Operator Timer Every Lot Peening Coverage 90% Min. Operator Visual Every Lot Almen Arc Height 0.30–0.40 Operator Gauge Once in a shift Falin- AGING RAIN- AGING Temperature 250° ± 10° Operator Temp. controller Every lot HS06QF00 5 Time Duration 15–20 Minutes Operator Timer Every lot HS06QF00 5 SCRAGGING HT 15 Operator Stopper Ensure during Set up HS06QF00		Т	ıp I'hickness	0.85~1.13	Inspector	VC/Dial															
OT PEENING The pening Time 15-20 Minutes Operator Timer Every Lot		A	ppearance	Free from burrs, & other visual defects		Visual	5 Pcs/ Setup & 5 Pcs/ 2 Hrs.											4			7
Peening Time 15-20 Minutes Operator Timer Every Lot Peening Coverage 90% Min. Operator Visual Every Lot Almen Arc Height 0.30-0.40 Operator Gauge Once in a shift RAIN- AGING Temperature 250° ± 10° Operator Temp. controller Every lot HS06QFO0 5 Time Duration 15-20 Minutes Operator Timer Every lot HS06QFO0 5 RAGGING SCRAGGING HT 15 Operator Sopper Ensure during Set up HS06QFO0	OT PEENING					I.	1	l .	1	1	1		<u> </u>		II	1	1				
Almen Arc Height 0.30-0.40 Operator Gauge Once in a shift RAIN- AGING Temperature 250° ± 10° Operator Temp. controller Every lot HS06QFO0 5 Time Duration 15-20 Minutes Operator Timer Every lot HS06QFO0 5 RAGGING SCRAGGING HT 15 Operator Stopper Ensure during Set up HS06QFO0			eening Time	15~20 Minutes	Operator	Timer	Every Lot											-			-
Almen Arc Height 0.30–0.40 Operator Gauge Once in a shift RAIN- AGING Temperature 250° ± 10° Operator Temp. controller Every lot HS06QFO0 5 Time Duration 15–20 Minutes Operator Timer Every lot HS06QFO0 5 RAGGING SCRAGGING HT 15 Operator Stopper Ensure during Set up HS06QFO0	Sheet Day 1	50 P	eening Coverage	90% Min.	Operator	Visual	Every Lot											4	6066	2	1
RAIN- AGING Temperature 250° ± 10° Operator Temp. controller Every lot HS06QFO0 5	not reening		Imen Arc Height	0.30~0.40	Operator	Gauge	Once in a shift											46			1
Train- aging 60 Temperature 250° ± 10° Operator Temp. controller Every lot HS06QFO0 5 Time Duration 15–20 Minutes Operator Timer Every lot HS06QFO0 5 RAGGING SCRAGGING HT 15 Operator Stopper Ensure during Set up HS06QFO0		^	on Are ricigit	5.50-0.40	Sperator	Caugo	Once in a still			<u> </u>									1757	-	
train- aging 60 Time Duration 15-20 Minutes Operator Timer Every lot HS06QFC0 5 RAGGING SCRAGGING HT 15 Operator stopper Ensure during Set up HS06QFO0	RAIN- AGING	1		10500 400																	
RAGGING SCRAGGING HT 15 Operator stopper Ensure during Set up HS06QF00	Strain- aging		emperature	250° ± 10°	Operator	i emp. controller	Every lot											-		-	-
RAGGING SCRAGGING HT 15 Operator stopper Ensure during Set up HS06QF00		60 Ti	ime Duration	15~20 Minutes	Operator	Timer	Every lot	HS06QFO0												400	-
SCRAGGING HT 15 Operator stopper Ensure during Set up HS06QF00	PAGGING			1				3												5	
		1.5	CRAGGING HT	15	Operator	stopper	Ensure during Set up	HS06OFO0													
	CRAGGING	70																			
	ı	L		1	l .	I	1	1	1	1	1				II.	1	1	J			

Surface Printsh (0) Page preventive (0) (0.05-ert) (0.0	SURFACE FINISH- OILING											
Oiling oil on part												
Wire Da												
Proof Dispector 11-3 + 0-3 + 0.0 Inspector VoC Prin Gauge 5 Pos per for 15000/FO0 1500												
Finale Dis D. DT 41.13 + 0.33-0.0 Inspector VC Prin Gauge 5 Pos per lot 18080F00 1 1 1 1 1 1 1 1 1	A											
Coll OD a 18.60 Max Inspector VC S. Pres per lot HS00GPO0												
Free length	Description of the last of the											
Squareness et 0.50 mm Max.	4 3 4											
Squareness e1												
Solid Height 14.3mm Max. Inspector LTM 5 Pcs per lot HS060F00 9 9 1 1 1 1 1 1 1 1	Charles and 12											
No. of Active Coils 2.2 Ref. Inspector Visual Count. 5 Pcs per lot H5060PC0 9	207											
9 No. of Total Coils 4.2 Ref. Inspector Visual Count. 5 Pcs per lot HS06QFO0	REGISTER .											
No. of Total Coils	0 : : - ;											
Direction of winding RH Inspector Visual 5 Pcs per lot HS06QF00 9	1000											
Final Inspection 90 Load at 2.0 mm def. 39.3 Kg ± 7% Inspector LTM 5 Pcs per lot HS06QF00 9	•											
Final Inspection 90 Load at 2.0 mm def. 39.3 Kg ± 7% Inspector LTM 5 Pcs per lot HS06QF00 9												
Spring Rate 19.67 Kgt/mm Inspector LTM 5 Pcs per lot HS06QFO0 9 9 9 9 9 9 9 9 9												
Spring Rate 19.67 Kgf/mm Inspector LTM 5 Pcs per lot H506QF00 9												
Spring Rate	Production of the Party of the											
Scragging Height 15 mm												
Tip Thickness												
End Condition Square & Ground (270° Inspector Visual 5 Pcs per lot HS06QF00												
End Condition Square & Ground (270° Inspector Visual 5 Pcs per lot HS06QF00												
Shot Peening 90% Coverage Inspector Visual 5 Pcs per lot HS06QF00												
Surface Finish Oiled Inspector Visual 5 Pcs per lot HS06QF00 9												
Material Grade-DH as per IS Inspector RMTC 5 Pcs per lot HS06QF00												
4454 part1 9												
PACKING & DISPATCH												
Packing & 100 Pa												
Dispatch 8 No damage during Packing as per WI Operator Visual Every lot -												