TENNECO

○ Prototype ○ Pre-Launch ◉ Production

CONTROL PLAN

Control Plan N° **KUN_QI-PDS-16 Ind L**	Contact : János Zsár Phone : +36 70 5158408	Date (Orig) 11.09.2015	Date (Rev) 28.02.2022
Description / Process: **OFFLINE CUTTING**	Project team **NJ / KDA / ZSJ / SZJ / KE**	Customer Engineering approval / Date (if needed)	
Designation / process: **CUT PARTS**	Qaulity approval /Date János Zsár	Customer quality approval / Date (if needed)	
Cég. **FEDERAL MOGUL SP** / Telephely **KIMLE**	Production approval /Date Kozma Gyula	Other approval / Date (if needed)	

Article / Proc. #	Process/ Operation Description	Machine, Equipment, production Tool	Characteristics N°	Characteristics Product	Characteristics Process	Special Characteristics	Methodology Specification Product / Process / Tolerance	Methodology Evaluation / Measurement methods	Sample	Frequency Freq. Level 1	Frequency Freq. Level 2	Frequency Freq. Level 3	Method of Monitoring	Reaction plan KUN_QP13-01
10					Choice of the material	▽	Timetable of Winding / Braiding Instruction Sheet	Visual + coherence test		1/Set + 1/Spool				See with the responsible
20	Preparation of Metzner offline cutting machine	Spool holder			winding up on the right lines		**KUN_QI-FAB 606**	Visual + Indicator Position		1/Set + 1/Spool				Stop Production
		Brake device, rollers			Path		**KUN_QI-FAB 606** right direction of the raw material	Visual		1/Set +1/Spool				Stop production, re-roven the tape
		Conveyor			Tension of the pulling tight		**KUN_Source 1211_01/02**	Visual + Potentiometer		1/Set				Stop Production, Ask maintenance request
	Preparation of the raw material	Metzner cut machine		Raw material	PO and raw material comformity		Scan the PO and the raw material together to confirm the correct material to be used at the production **KUN_QI-INS-083**	Visual, Scanner	1/S	1/Set +1/S			MfgPro	Stop production, IT request KUN_QF 606
	Preparation of Metzner cutting machine set up	Cutting blade			Type of blade (Cold or Hot)		**KUN_QI-FAB 606** the proper blade is fixed at the right place in the right position For CUT5 prep: **KUN_QI-FAB 687**	Visual		1/Set				Stop Production, Ask maintenance request
					State/dirting on cutting blade		undamaged and not twistted blade	Visual		1/Set				Stop production, Change the blade
					Set the temperature of the cutting blade		only for hot cut	Visual + Intensity display		1/Set				Stop Production, Ask maintenance request
					Presser roll		if the lenght < 100mm use the presser roll	Visual		1/Set				Stop Production, Ask maintenance request
		Display			Length setting		According to OF **KUN_Source1211 01/02** For CUT5: **KUN_QI-FAB 687**	Visual		1/Set				Stop Production, Ask maintenance request
					Quantity setting		According to OF **KUN_QI-FAB 606** For CUT5: **KUN_QI-FAB 687**	Visual		1/Set				Stop Production, Ask maintenance request
					Cutting mode setting (Cold or hot)		**KUN_QI-FAB 606 KUN_Source 1211_01/02** **For CUT5: KUN_QI-FAB 687**	Visual		1/Set				Stop Production, Ask maintenance request

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Article / Proc. #	Process/ Operation Description	Machine, Equipment, production Tool	Characteristics N°	Characteristics Product	Characteristics Process	Special Characteristics	Methodology Specification Product / Process / Tolerance	Methodology Evaluation / Measurement methods	Sample	Sample Frequency Freq. Level 1	Sample Frequency Freq. Level 2	Sample Frequency Freq. Level 3	Method of Monitoring	Reaction plan KUN_QP13-01
20	Cutting	Metzner cut machine		Appearance			**KUN_QI-GAM 16**	Visual	max. 25 pcs (~handful)	1/ Set KUN_QI-FAB-30			SPC Sinter Control	KUN_QI-MCQ 46 KUN_QI-MCQ-56
				Welding Quality			**KUN_QI-GAM 16** **KUN_QI-FAB-30**	Visual	max. 25 pcs (~handful)	1/ Set			SPC Sinter Control	KUN_QI-MCQ-46 KUN_QI-FAB 30 KUN_QF-080_CUT
				Length		▽	According to OF **KUN_Source121101/02** **KUN_QI-FAB-30**	Visual + caliper	max. 25 pcs (~handful)	1/ Set KUN_QI-FAB-30			SPC Sinter Control	KUN_QI-FAB 30 KUN_QF-080_CUT
				Diameter		▽	**KUN_QI-GAM 16**	Visual + mandrel	1/S	1/Set + 1/S			SPC Sinter Control	KUN_QI-MCQ-02 KUN_MCQ-56 KUN_MCQ-19 KUN_QF-080_CUT KUN_QI-FAB 30
50	Labeling Package			Quantity			**KUN_QI-GAM 16**	Visual scale		1/C				KUN_QI-FAB-30
				Labelling			**Acc. To the OF** **KUN_QI-GAM 16**	Scanning, Insert Data		1/C			MfgPro	Stop production, IT request
	Requalification			Heat aging			KUN_QF-426	Acc. To Norm (QF-45)	1,5 m			1/OFI 1/3 years	LABoratory	Stop production
				Flammability			KUN_QF-426	Acc. To Norm (QF-45)	2 m			1/OFI 1/3 years	LABoratory	Stop production
				Abrasion			KUN_QF-426	Acc. To Norm (QF-45)	1 m			1/OFI 1/2 years	LABoratory	Stop production
				Fluis resistance			KUN_QF-426	Acc. To Norm (QF-45)	1,5 m			1/OFI 1/3 years	LABoratory	Stop production