

BM
Industrialisierungsschritte
(Industrialization Steps)

WITTE order item	Position 20	Position 30	Position 40	Position 50
Labeling supplier	Ca- Sample	Cb - Sample	Cc- Sample	C Init - Sample
Fulfillment of drawing requirements for components	geometrical deviations allowed + all material characteristics fulfilled incl. surface treatment (deviations need to be aligned)	Min. all special features (SC/CC) dimensionally are in spec. All material characteristics fulfilled incl. surface treatment (deviations need to be aligned)	Completed all SC/CC and PM characteristics according to drawing. All material characteristics fulfilled incl. surface treatment	100% fulfillment
Construction material	Material according to drawing	Material according to drawing	Material according to drawing	Material according to drawing
Process flow including sub-processes	similar series process	Series process; deviations need to be aligned with WITTE	Series process	100% Series process interlinked
Manufacturing location	Alternate Manufacturing location possible needs to be aligned with WITTE	Alternate Manufacturing location possible needs to be aligned with WITTE	Series location	Series location
Machine	Alternate Machine possible needs to be aligned with WITTE	Series machine possible deviation needs to be aligned with WITTE	Series machine	Series machine
Requested documents (uploaded into WITTE supplier portal)	WITTE component measurement template, material certificate, surface treatment, hardening treatment, heat treatment	WITTE component measurement template / MSA (SC/CC/P) / overall dimensional measurement report / IMDS / material certificate / part history	WITTE component measurement template / MSA (SC/CC/P) / overall dimensional measurement report / IMDS / material certificate / part history	All required documents for initial sampling (RES) are available to WITTE
MSA	Not requested	MSA has to be successfully performed for SC and CC characteristics with aligned measurement devices in QA.	MSA has to be successfully performed for SC, CC and PM with aligned measurement devices in QA. If measurement system has not been changed between Cb and Cc status MSA results can be carried over.	MSA has to be successfully performed for SC, CC and PM with aligned measurement devices in QA. If measurement system has not been changed between Cc and C - INIT status MSA results can be carried over.
Measuring reports (uploaded into WITTE supplier portal in the available WITTE template)	Measurement report in WITTE template with min.: - for SC / CC / PM / other dimensions - 5 pieces per cavity for tools with ≤ 4 cavities - for SC / CC / PM / other dimensions - 3 pieces per cavity for tools with > 4 cavities	Measurement report in WITTE template with min.: - for SC / CC / PM / other dimensions - 5 pieces per cavity for tools with ≤ 4 cavities - for SC / CC / PM / other dimensions - 3 pieces per cavity for tools with > 4 cavities	Measurement report in WITTE template with min.: - for SC / CC - 20 pieces per cavity measured for all cavities ≤ 4 with successfully performed <u>machine capability</u> and for cavities > 4 and higher - 10 pieces per cavity measured for cavities range and mean value as comparison for <u>machine capability</u> . - for PM dimension and other dimensions - 5 pieces per cavity measured - SC / CC characteristics - 20 pieces per cavity - Cmk 2,36 - SC / CC characteristics - 50 pieces per cavity - Cmk 2,00	Measurement report in WITTE template with min.: - for SC/CC - 125 pieces in total over all cavities measured to successfully perform <u>process capability</u> or 50 pieces per cavity (including 20 pieces from Cc samples) - for PM and other dimensions - 5 pieces per cavity measured <u>During initial PPAP phase:</u> - SC / CC characteristics - 125 pieces over all cavities - Ppk 2,00 - SC / CC characteristics - 50 pieces per cavity - Ppk 2,38 <u>In stable series process:</u> - SC / CC characteristics - over all cavities - Cpk 1,67
Measuring reports after physical modification of the tool during different sample shipments (uploaded into WITTE supplier portal)	Measurement report in WITTE template with min. - for SC / CC - 5 pieces per cavity			
Subsupplier status	Not requested	Alternate series process at the sub-supplier	Conditionally released series supplier/-parts	Only approved Series supplier /-parts
Sample delivery to WITTE	Yes, incl. Tracking no., according to specification and order in WITTE supplier portal (sampling)	Yes, incl. Tracking no., according to specification and order in WITTE supplier portal (sampling)	Yes, incl. Tracking no., according to specification and order in WITTE supplier portal (sampling)	Yes, incl. Tracking no., according to specification and order in WITTE supplier portal (sampling)
Transport + packaging	Individual packaging	Packaging exactly after agreement	Series-packaging according packaging data sheet	Series-packaging according packaging data sheet
Inspection equipment	None	Completely available / inspected (certificate of proficiency) - unless otherwise agreed in the feasibility commitment	Completely available / inspected (certificate of proficiency)	Completely available / inspected (certificate of proficiency)
Modification = correction, change of tooling	Additional project-specific requirements for sampling can be defined and requested in the RES (required evidence of sampling)!			