312267

GETRAG

Part Submission Warrant

Part Name: Speed Gear SR1 | Customer Part Number: 250.1.3775.76

Shown on Drawing No.: 250.1.3775.76 | Organization Part #:

Engineering Change Level: a C000288_MIP_1 | Dated: 25-mar-15

Additional Engineering Changes: | Dated:

Safety and/or Government Regulation ☑ Yes ☐ No | Purchase Order No.: | Weight (kg): 1.5230

Checking Aid No.: | Checking Aid Engineering Change Level: | Dated:

ORGANIZATION MANUFACTURING INFORMATION

GETRAG MODUGNO
Organization Name & Supplier/Vendor Code

VIA DEI CICLAMINI N°4
Street Address

MODUGNO | BARI | 70026 | ITALY
City | Region | Postal Code | Country

CUSTOMER SUBMITTAL INFORMATION

FORD (Fox)
Customer Name/Division

Buyer/Buyer Code

TYP 250
Application

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? ☑ Yes ☐ No ☐ n/a

Submitted by IMDS or other customer format:

Are polymeric parts identified with appropriate ISO marking codes? ☐ Yes ☐ No ☑ n/a

REASON FOR SUBMISSION (Check at least one)

- ☐ Initial Submission
- ☑ Engineering Change(s)
- ☐ Tooling: Transfer, Replacement, Refurbishment, or additional
- ☐ Correction of Discrepancy
- ☐ Tooling Inactive > than 1 year
- ☐ Change to Optional Construction or Material
- ☐ Supplier or Material Source Change
- ☐ Change in Part Processing
- ☐ Parts Produced at Additional Location
- ☐ Other - please specify below

REQUESTED SUBMISSION LEVEL (Check one)

- ☐ Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
- ☐ Level 2 - Warrant with product samples and limited supporting data submitted to customer.
- ☑ Level 3 - Warrant with product samples and complete supporting data submitted to customer.
- ☐ Level 4 - Warrant and other requirements as defined by customer.
- ☐ Level 5 - Warrant with product samples and complete supporting data reviewed at organization's manufacturing location.

SUBMISSION RESULTS

The results for ☑ dimensional measurements ☐ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all drawing and specification requirements: ☑ Yes ☐ NO (If "NO" - Explanation Required)

Mold / Cavity / Production Process

DECLARATION

I hereby affirm that the samples represented by this warrant are representative of our parts which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of ____ / ____ hours. I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.

EXPLANATION / COMMENTS: **Identification groove introduction (only for FOX)**

Is each Customer Tool properly tagged and numbered? ☐ Yes ☐ No ☑ n/a

Organization Authorized Signature: Camarda | Date: 27/03/2015

Print Name: Camarda Ettore | Phone No.: tel 390805858580 | Fax No.:

Title: GPS Leader | E-mail: ettore.camarda@getrag.com

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: ☒ Approved ☐ Rejected ☐ Other

Customer Signature: J Snetea | Date: 27.03.15

Print Name | Customer Tracking Number (optional)

GETRAG Production Part Approval

DIMENSIONAL TEST RESULTS

Organization:	GETRAG	Part Number:	250.1.3775.76
Supplier/Vendor Code:	GETRAG Modugno	Part Name:	SR1
INSPECTION FACILITY:		Design Record Change Level:	25/03/2015
NA		Engineering Change Documents:	a C000288_MIP_1

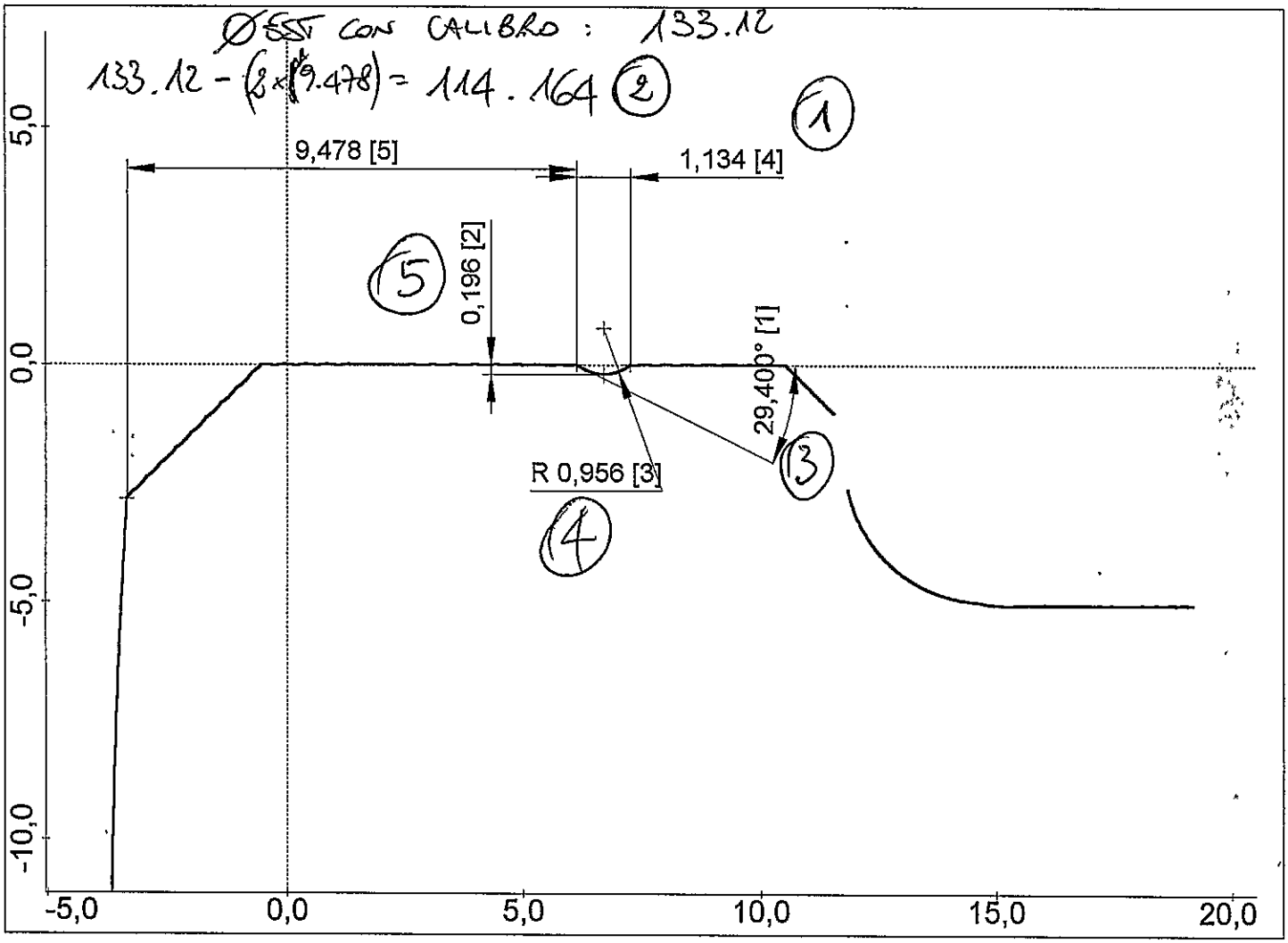
Item	Dimension/Specification	Specification / Limits		Test Date	Qty. Tested	Organization Measurement Results (Data) 1	2	3	4	5	controllo distruttivo	Ok	Not Ok
1	Larghezza gola	1.200	0.600		5	1.134	1.108	1.148	1.142	1.091		ok	
2	Distanza gola	114.600	113.400		5	114.164	114.132	114.146	113.992	114.040		ok	
3	Angolo gola	38.00	32.00		5	29.400	30.212	29.335	28.072	28.175		ok	
4	Raggio gola	-	-		5	0.956	0.819	0.749	0.749	0.866		ok	
5	Profondità gola	0.450	0.150		5	0.196	0.204	0.190	0.188	0.183		ok	

SIGNATURE	TITLE	DATE
G. Russo	QPE	27/03/2015

GETRAG

Via dei Ciclamini 4, Modugno (BA)

Oggetto:	SR1
Numero:	3775 PZ N.1
Operatore:	TURNO B
Data, ora:	27.03.2015, 10:27
Nota:	PROFILO S
Tastatore:	PCV 350 / 33 mm
Macchina:	MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK ☐

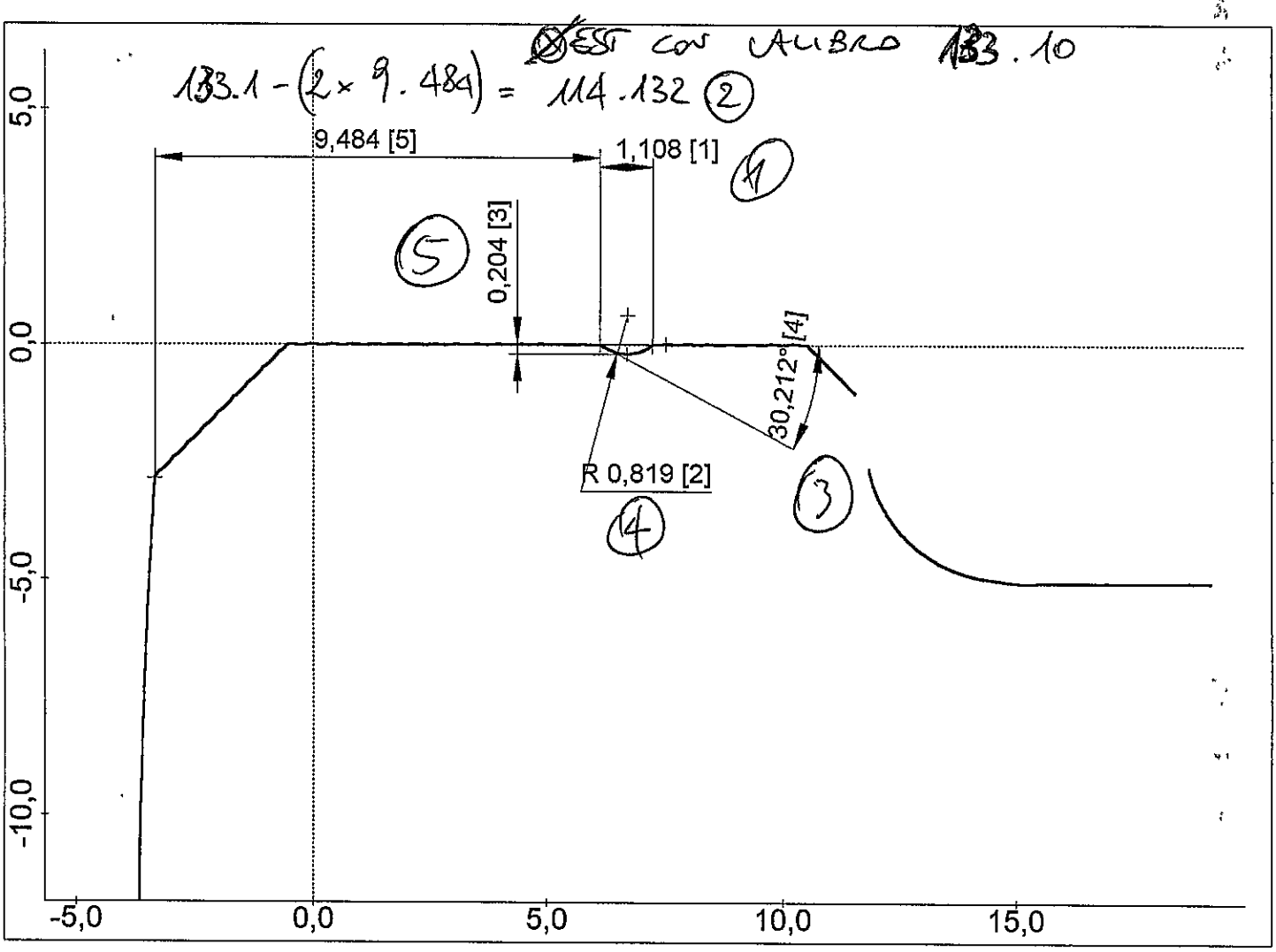
NOK ☐

N°BADGE ODP RICEVENTE

GETRAG

Via dei Ciclamini 4, Modugno (BA)

Oggetto:	SR1
Numero:	3775 PZ N.2
Operatore:	TURNO B
Data, ora:	27.03.2015, 10:27
Nota:	PROFILO S
Tastatore:	PCV 350 / 33 mm
Macchina:	MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK ☐

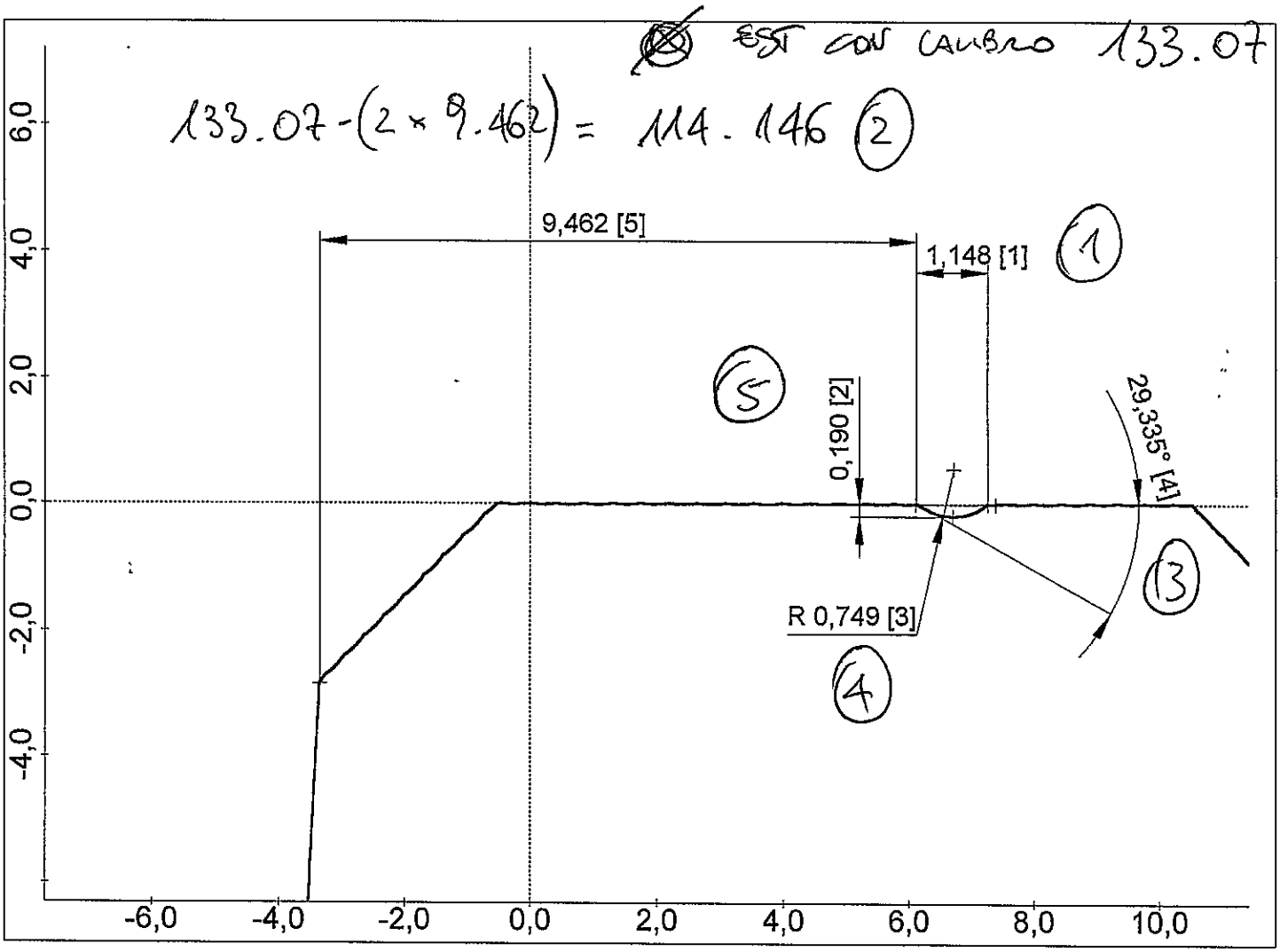
NOK ☐

N°BADGE ODP RICEVENTE

GETRAG

Via dei Ciclamini 4, Modugno (BA)

Oggetto:	SR1
Numero:	3775 PZ N.3
Operatore:	TURNO B
Data, ora:	27.03.2015, 10:27
Nota:	PROFILO S
Tastatore:	PCV 350 / 33 mm
Macchina:	MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK ☐

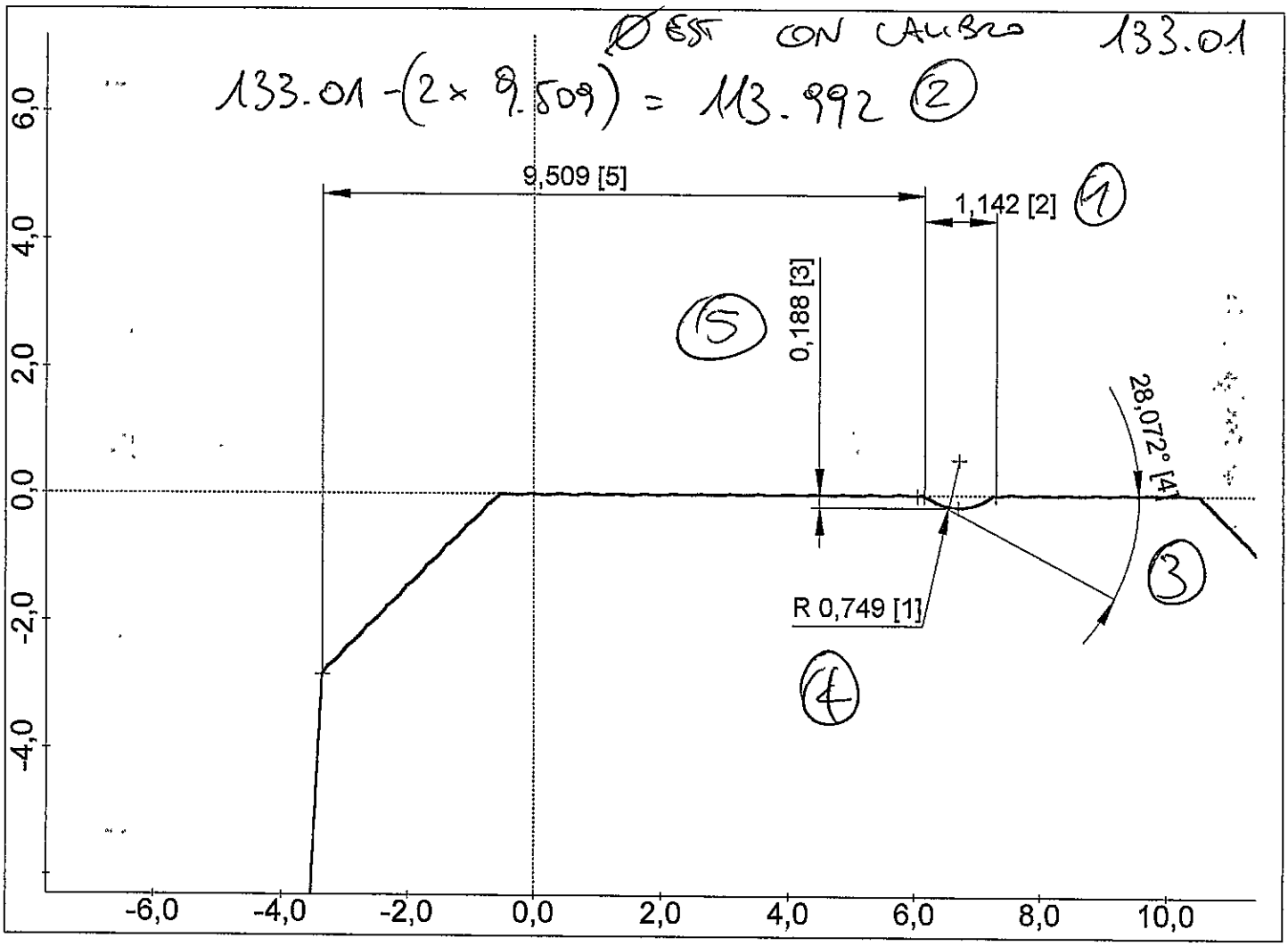
NOK ☐

N°BADGE ODP RICEVENTE

GETRAG

Via dei Ciclamini 4, Modugno (BA)

Oggetto:	SR1
Numero:	3775 PZ N.4
Operatore:	TURNO B
Data, ora:	27.3.2015, 10:27
Nota:	PROFILO S
Tastatore:	PCV 350 / 33 mm
Macchina:	MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK ☐

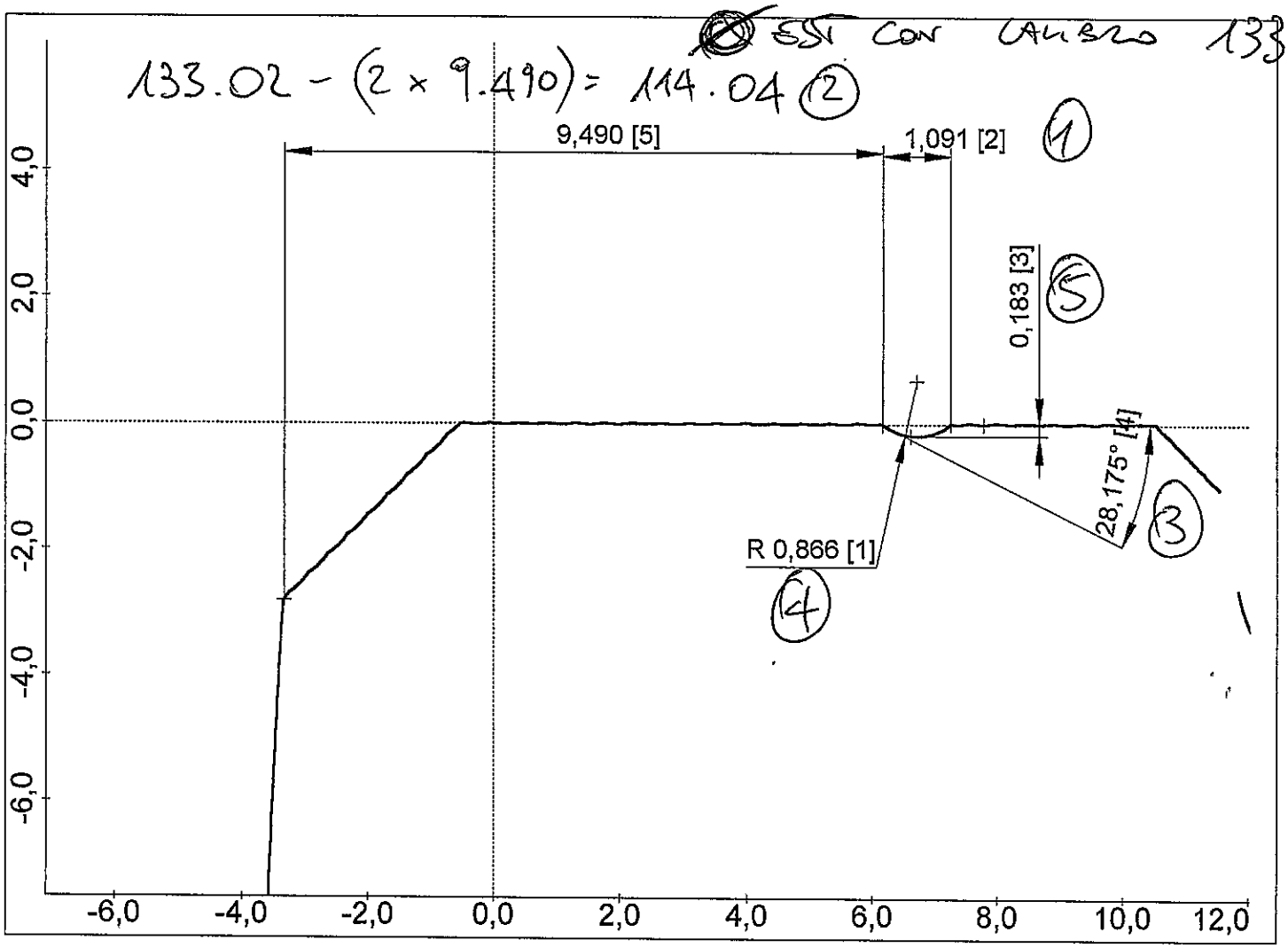
NOK ☐

N°BADGE ODP RICEVENTE

GETRAG

Via dei Ciclamini 4, Modugno (BA)

Oggetto:	SR1
Numero:	3775 PZ N.5
Operatore:	TURNO B
Data, ora:	27.3.2015, 10:27
Nota:	PROFILO S
Tastatore:	PCV 350 / 33 mm
Macchina:	MOA 416120 002



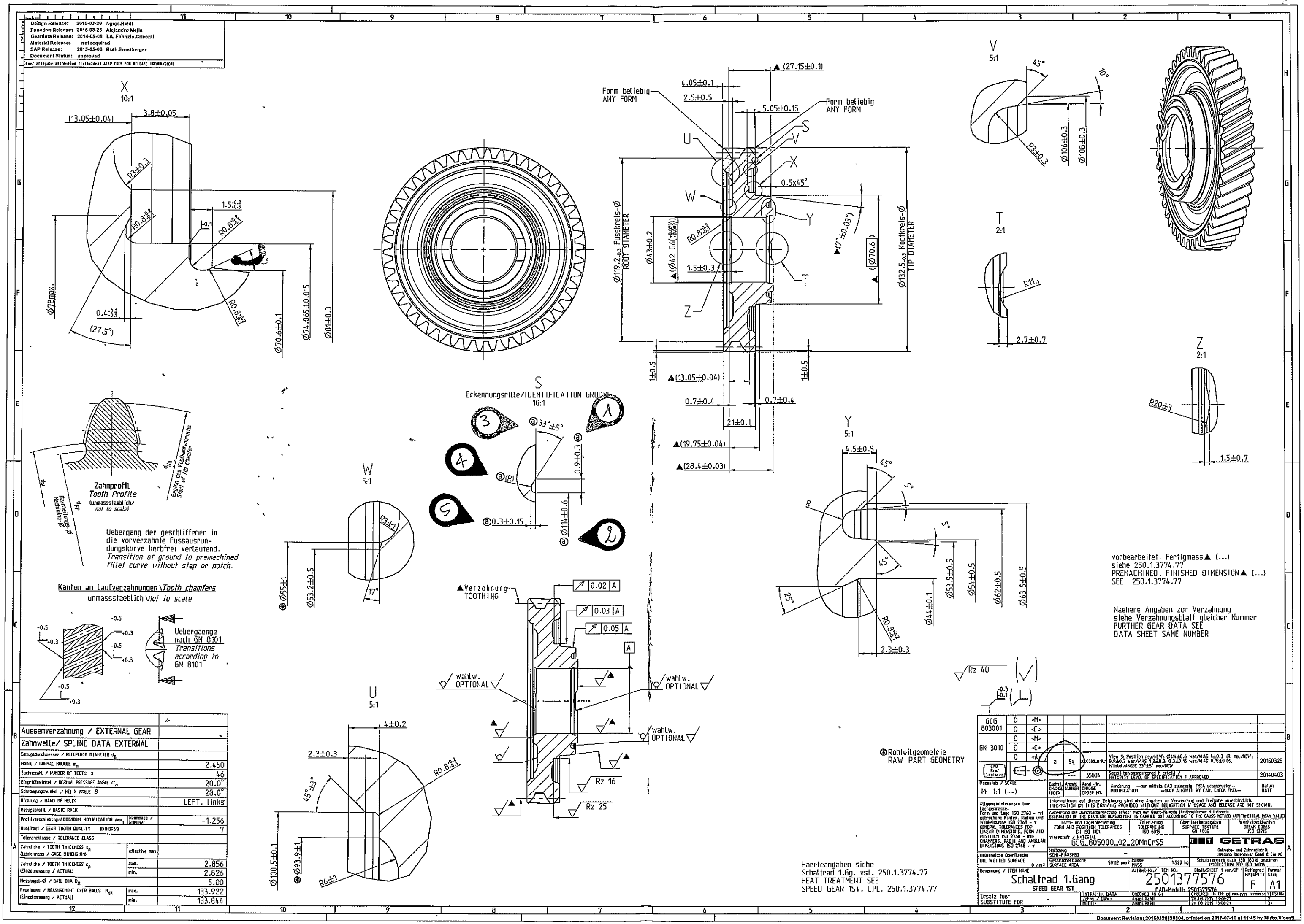
PERTHOMETER CONCEPT

Area Riservata alla Produzione	
Valutazione Profilo	
OK	☐
NOK	☐
N°BADGE ODP RICEVENTE	

Drawing 3775 update from index "-" to "a"					
Short description:	a	5x	000288_HIP_1	View S: Position neu/NEW: Ø114±0.6 war/WAS 4±0.3; (R) neu/NEW: 0.9±0.3 war/WAS 1.2±0.3; 0.3±0.15 war/WAS 0.15±0.05; Winkel/ANGLE 33°±5° neu/NEW	20150325
				Spezifikationsformat_Fertigung_	
Id. groove implementation					

	PPAP Requirements	Required	Note	PPAP Docs updated
1	Design Records	Yes		YES
2	Authorized Engineering change documents	Yes	see dwg	YES
3	Customer Engineering approval	n.a.		
4	DFMEA	NO		
5	Process flow diagram(s)	NO		
6	PFMEA	Yes		YES
7	Control plan	Yes		YES
8	Measurement system analysis studies	NO		
9	Dimensional results	Yes		YES
10	Records of Material / Performance test results	NO		
11	Initial process studies	NO		
12	Qualified laboratory documentation	NO		
13	Appearance Approval Report (A.A.R.)	n.a.		
14	Sample Production Parts	Yes		YES
15	Master sample	Yes		YES
16	Checking aids	n.a.		
17	Customer-Specific Requirements	NO		
18	Part Submission Warrant (PSW)	Yes		YES
	Other requirements			
1	PSW Raw part	NO		
2	PSW E.P. part	NO		
3	PSW Engagement Rings	NO		

Design Release: 2015-03-26 Agapi.Raidt
Function Release: 2015-03-26 Alejandro Mejia
Geardata Release: 2014-05-08 I.A. Fabrizio.Gricenti
Material Release: not required
SAP Release: 2015-05-06 Ruth.Ernstberger
Document Status: approved
Fuer Freigabeinformation freiheitlich KEEP FREE FOR RELEASE INFORMATION!



Aussenverzahnung / EXTERNAL GEAR		
Zahnwelle/ SPLINE DATA EXTERNAL		
Bezugsdurchmesser / REFERENCE DIAMETER d_B		
Modul / NORMAL MODULE m_n		2.450
Zaehnezahl / NUMBER OF TEETH z		46
Eingriffswinkel / NORMAL PRESSURE ANGLE α_n		20.0°
Schraegungswinkel / HELIX ANGLE β		28.0°
Richtung / HAND OF HELIX		LEFT, Links
Bezugsprofil / BASIC RACK		
Profilverschiebung/ADDENDUM MODIFICATION $x=m_n$	Nennmass / NOMINAL	-1.256
Qualitaet / GEAR TOOTH QUALITY DIN3961		7
Toleranzklasse / TOLERANCE CLASS		
Zahndicke / TOOTH THICKNESS s_n (Lehrenmass / GAGE DIMENSION)	effective max.	
Zahndicke / TOOTH THICKNESS s_n (Einzelmessung / ACTUAL)	max.	2.856
	min.	2.826
Messkugel-Ø / BALL DIA D_M		5.00
Pruefmass / MEASUREMENT OVER BALLS M_{dK} (Einzelmessung / ACTUAL)	max.	133.922
	min.	133.844

GCG 803001	0	<M>					
	0	<C>					
GN 3010	0	<M>					
	0	<C>					
	0	<A>					
CAD Pref Engineer	a	5x	130286.MIP.1	View 5: Position neu/NEW: Ø114±0.6 war/WAS 4±0.3 (R) neu/NEW: 0.9±0.3 war/WAS 1.2±0.3; 0.3±0.15 war/WAS 0.75±0.05, Winkel/ANGLE 33°±5° neu/NEW	20150325
		---	35834	Spezifikationsreifegrad F erteilt / MATURITY LEVEL OF SPECIFICATION F APPROVED	20140403

Massstab / SCALE M: 1:1 (--)
Aenderungsindex / CHANGE INDEX | Anzahl / NUMBER | Aenderungsnummer / CHANGE ORDER NO. | Aenderung --nur mittels CAD zulaessig MODIFICATION --ONLY ALLOWED BY CAD. CHECK FMEA-- | Datum / DATE

Allgemeintoleranzen fuer Laengenmasse, Form und Lage ISO 2768 - mit gebrochene Kanten, Radien und Winkelmasse ISO 2768 - v
GENERAL TOLERANCES FOR LINEAR DIMENSIONS, FORM AND POSITION ISO 2768 - mK CHAMFERS, RADII AND ANGULAR DIMENSIONS ISO 2768 - v

Informationen auf dieser Zeichnung sind ohne Angaben zu Verwendung und Freigabe unerheblich.
INFORMATION ON THIS DRAWING PROVIDED WITHOUT OBLIGATION IF USAGE AND RELEASE ARE NOT SHOWN.
Auswertung der Durchmessermessung erfolgt nach der Gauss-Methode (Arithmetischer Mittelwert)
EVALUATION OF THE DIAMETER MEASUREMENT IS CARRIED OUT ACCORDING TO THE GAUSS METHOD (ARITHMETICAL MEAN VALUE)
Form- und Lagetolerierung FORM AND POSITION TOLERANCES EN ISO 1101 | Toleranzen TOLERANCING ISO 8015 | Oberflaechenangaben SURFACE TEXTURE GN 4005 | Weitstuerzkanten BREAK EDGES ISO 13715

Werkstoff / MATERIAL GCG_805000_02_20MnCrS5
Haerterei / HARDENING SEMI-FINISHED
oelbenetzte Oberflaeche / OIL WETTED SURFACE 0 mm²
Gesamtoberflaeche / SURFACE AREA 50112 mm²
Masse / MASS 1.523 kg

GETRAG
Getriebe- und Zahnradfabrik Hermann Hagenmeyer GmbH & Cie KG
Schutzvermerk nach ISO 16016 beachten PROTECTION PER ISO 16016.

Bezeichnung / ITEM NAME: Schaltrad 1.Gang
SPEED GEAR 1ST
Artikel-Nr. / ITEM NO.: 2501377576
CAD-Modell: 2501377576
Blatt/SHEET 1 von/OF 1 | Reifegrad MATURITY: F | Format SIZE: A1
Ersatz fuer / SUBSTITUTE FOR: -

INTERNAL DATA	CHECKED BY	CHECKED IN TOC DO NOT CHANGE	VERSION
Zeichn / DRWN:	Angel.Raidt	26.03.2015 13:06:21	2
Model:	Angel.Raidt	26.03.2015 13:06:21	3

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