

31666



Part Name: Output Shaft 01 Cust. Part No.: 251.6.1076.35
 Shown on Drawing No.: 251.6.1076.35 Org. Part No.: 251.6.1076.35
 Engineering Change Level: 3 Index "I" (C003959MIP1) Dated: 20/03/2017
 Additional Engineering Changes: na Dated: na
 Safety and/or Government Regulation: Yes No Purchase Order No.: _____ Weight (kg): 1.748
 Checking Aid No.: na Checking Aid Engineering Change Level: na Dated: na

ORGANIZATION MANUFACTURING INFORMATION

CUSTOMER SUBMITTAL INFORMATION

Getrag S.p.A.
 Organization Name & Supplier / Supplier Code
Via dei Ciclamini, 4
 Street Address
Modugno (Ba) Puglia 70026 Italy
 City Region Postal Code Country

Bari assembly line (GPS4)
 Customer Name / Division
na
 Buyer / Buyer Code
DCT300
 Application

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? Yes No n/a
 Submitted by IMDS or other customer format: _____
 (IMDS=International Material Data System)

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 Other or Additional Location
- Other - please specify below (e.g. additional specific customer requirement or e.g. change of EP parts)

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 na

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 163 / 8 hours. I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from the declaration below.

EXPLANATION / COMMENTS:

- Change on details S and W definitions (index d)
- Change on Spline IIa and IIIa MdK and Class (index e)
- Getrag standard for heat treatment measurement (already in place) - (index e)
- Getrag standard for cleanliness requirement (already in place) - (index e)
- Chamfer tolerance on detail X (index e)
- Change on details Y definitions (index f)

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

Organization Authorized Signature: [Signature] Date: 19/10/2017
 Print Name: Tursi Dario Maria Phone No.: +39 0805858360 Fax No.: _____
 Title: 7DCT300 Launch Manager E-Mail: dario.tursi@magna.com

FOR CUSTOMER USE ONLY (If applicable)

Part Warrant Disposition: Approved Rejected Other
 Customer Signature: [Signature] Date: 19.10.2017
 Print Name: _____ Customer Tracking No.: _____

Drawing update from index "d" to "f"

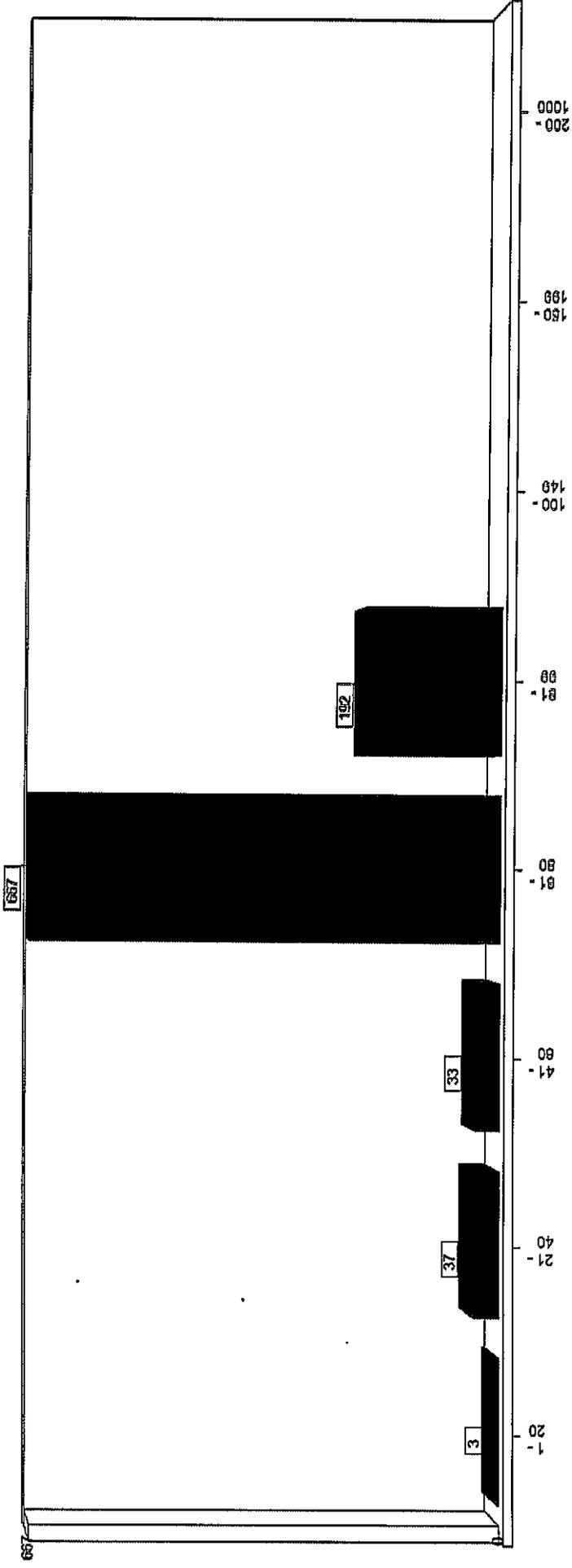
| Short description: | | F | 3x | C003959HIP | (1,125max. war/WAS 0.9max., (27.5) emf./DEL., Halbz/NOTE neu/NEW.) | 20170320 |
|--------------------|--|---|-----|------------|--|----------|
| | | e | 13x | C006034CP1 | Verzahnungslehre/TEETH TABLE; Spalte/CDLUM iia, iib, iic und/AND iid aktualisiert/UPDATED, *R emf./DEL. (x) und/AND *R (2x) neu/NEW; Technische Sauberkeit/TECHNICAL CLEANLINESS aktualisiert/UPDATED; einseitigehärtet und angelassen/CASE HARDENED AND TEMPERED aktualisiert/UPDATED; Rr Kantenbruch/BREAK EDGES | 20170126 |
| | | d | 10x | C006346CP1 | *W: 1.055-0.1, RD STD 157-D.1, Halbz/NOTE und/AND Symbol/ICON neu/NEW, Halbz/NOTE geändert/CHANGED. | 20161027 |

| PPAP Requirements | | Required | Note | PPAP Docs updated |
|--------------------|--|----------|---------------------------------|-------------------|
| 1 | Design Records | Yes | Final Drawing + Gear Data + VBZ | 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 | | |

19/10/2017

DCT300 – OS1: PFMEA RPN Status

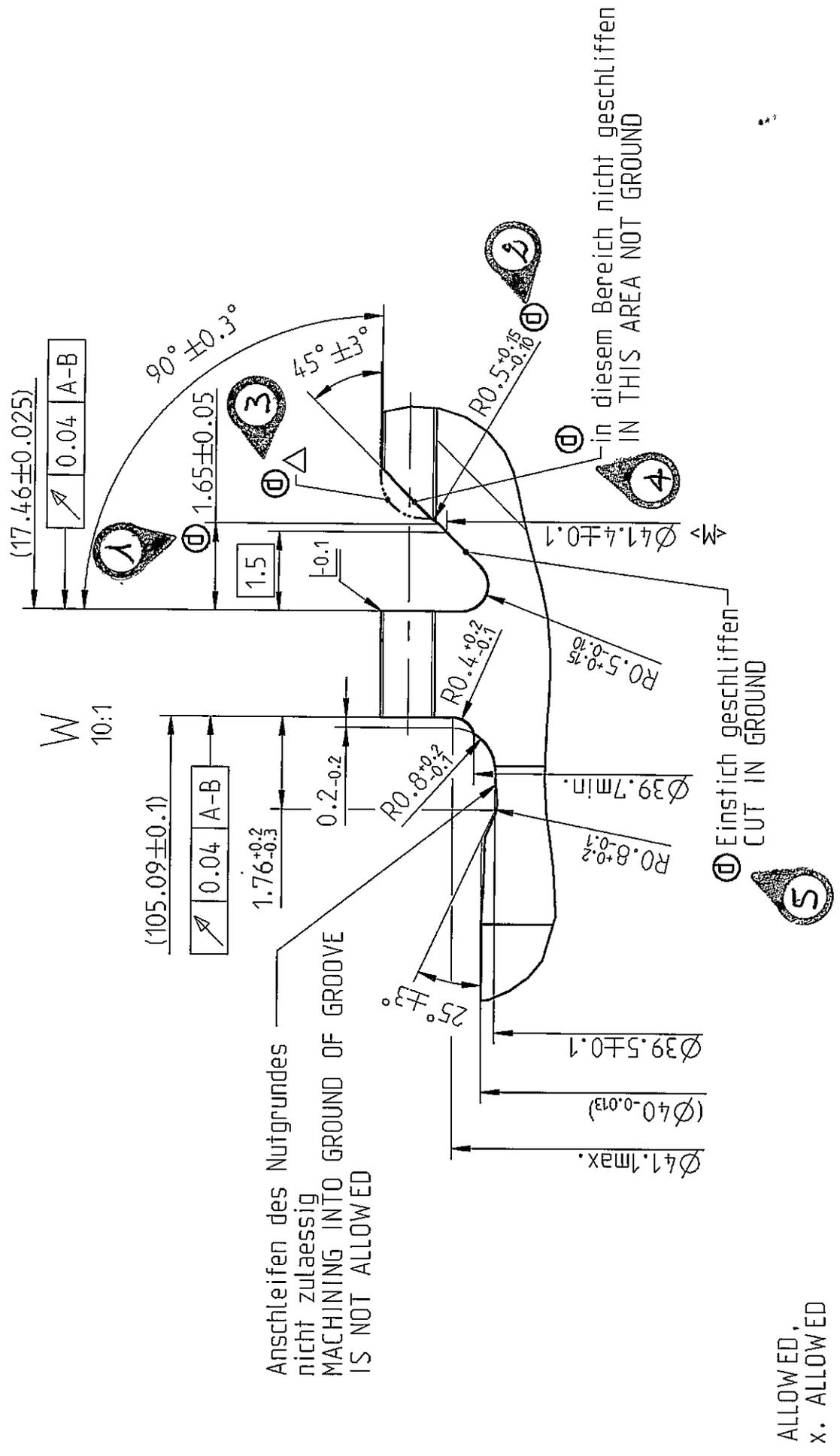
| | | | | |
|---|--|---|---|---------------------------|
| ■■■ GETRAG | | F I M E A Processo | | Numero: 12.3.1.1.1 |
| Tipo/Modello/Produzione/Lotto: 7DCT300 | | Numero Disegno: 251.6.1076.35 | Responsabile: Getrag | Pagina: 31/08/2015 |
| FMEA/Elemento: OS1 | | Stato modifica: Lev.3 - 20/03/2017 "I" | Ditta: Getrag | Emesso: 13/01/2017 |
| | | Codice dell'operazione: Tutte | Responsabile: Ratti, Testuzza, Tanzi T., Landfiscina Guerra, Santobelli, Caponio, Vicenti | Modificato: 12/04/2017 |
| | | Stato modifica: | Ditta: | |



| | | | |
|--------------------------|--------------------------|-----------------------------------|-----------------------------------|
| Record Owner: Vicenti D. | Date Issued: 06.03.2017 | GIS1 Item Number: 28.04 | Page: 1 / 1 |
| Dept.: WLP | Date Revised: 12.04.2017 | GIS2 Classification: Confidential | Retention Start Date (Year): 2017 |

$R0.4^{+0.2}$

$\phi 43 \pm 0.1$



Anschleifen des Nutgrundes
nicht zulässig
MACHINING INTO GROOVE
IS NOT ALLOWED

Ⓢ Einstich geschliffen
CUT IN GROUND

in diesem Bereich nicht geschliffen
IN THIS AREA NOT GRIND

ALLOWED,
X. ALLOWED

1:2

1

W
10:1

(105.09 ± 0.1)

0.04 A-B

1.76^{+0.2}_{-0.3}

0.2-0.2

$R0.8^{+0.2}$
 -0.1

25° F₃

$\phi 39.5 \pm 0.1$

($\phi 40.0 \pm 0.013$)

$\phi 41.1 \text{ max.}$

$\phi 39.7 \text{ min.}$

$R0.8^{+0.2}$
 -0.1

$R0.5^{+0.75}$
 -0.10

$R0.4^{+0.2}$
 -0.1

$R0.5^{+0.75}$
 -0.10

1.65 ± 0.05

90° ± 0.3°

45° ± 3°

1.5

±0.1

$\phi 41.4 \pm 0.1$

(17.46 ± 0.025)

0.04 A-B

1.5

10:1

(105.09 ± 0.1)

0.04 A-B

1.76^{+0.2}
 -0.3

0.2-0.2

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±0.1

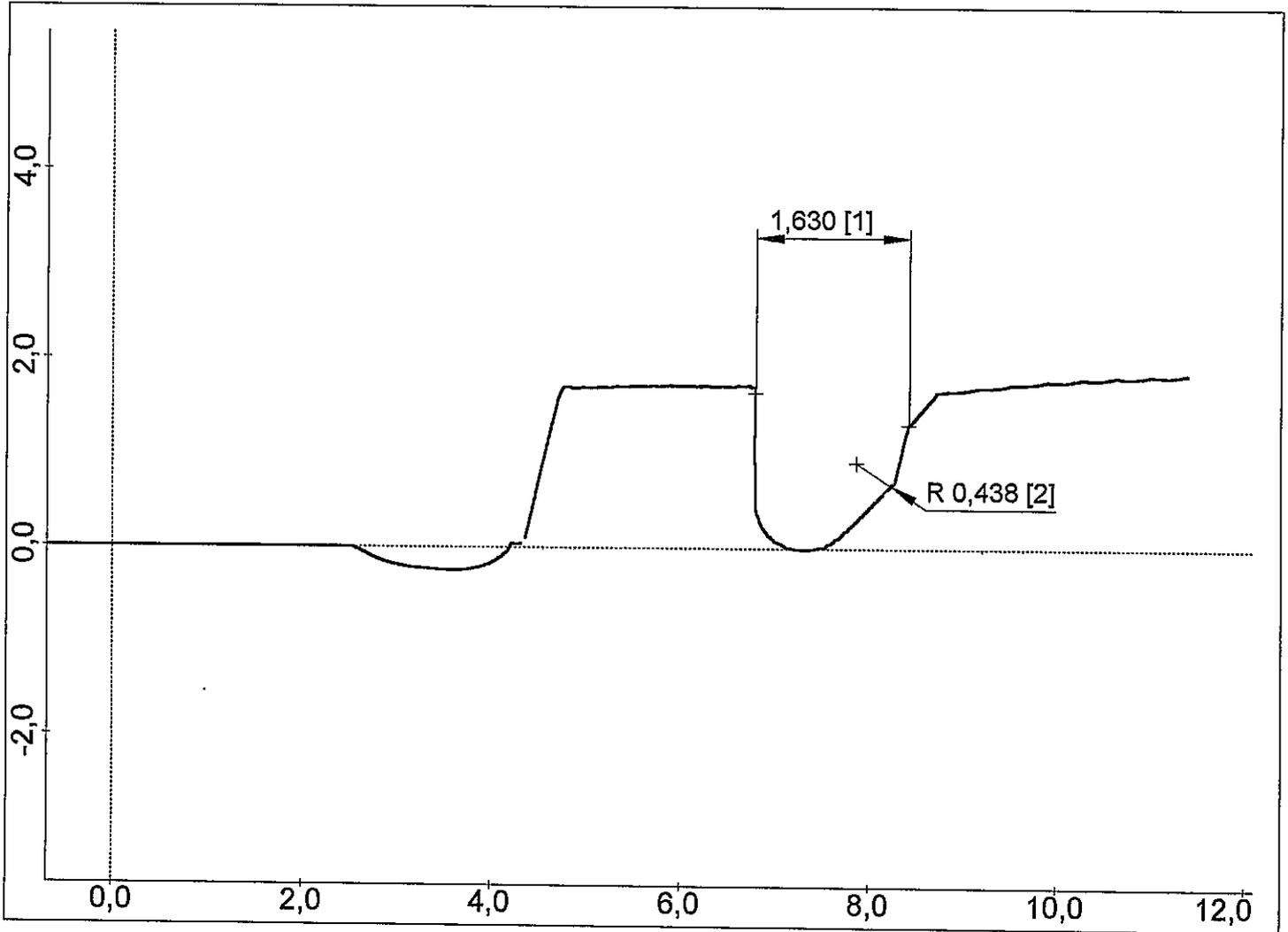
$\phi 41.4 \pm 0.1$

(17.46 ± 0.025)

0.04 A-B

1.5

10:1



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

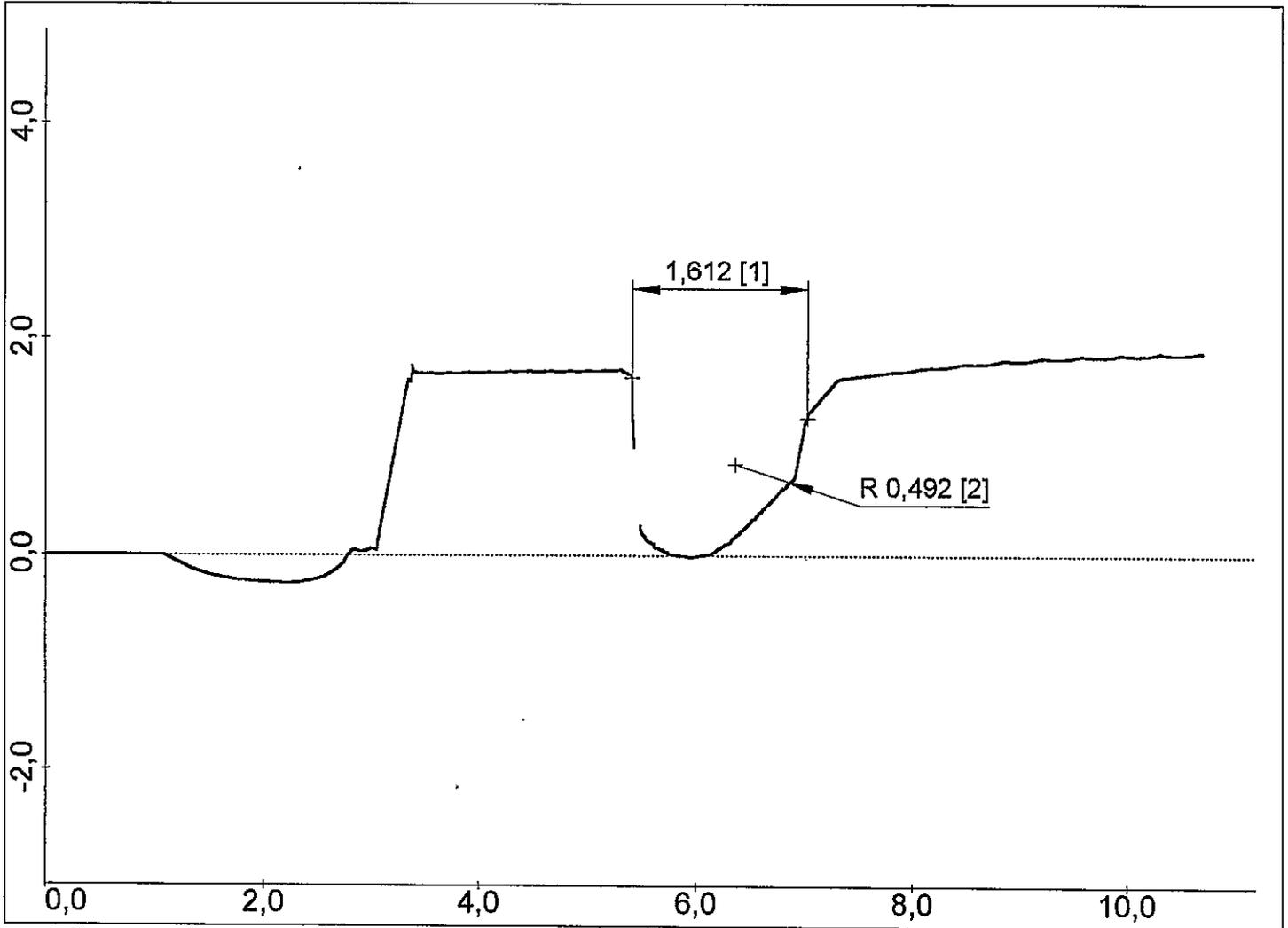
N°BADGE ODP RICEVENTE



Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N 2
Operatore: TURNO B
Data, ora: 11.10.2017, 12:11
Nota: PART W (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

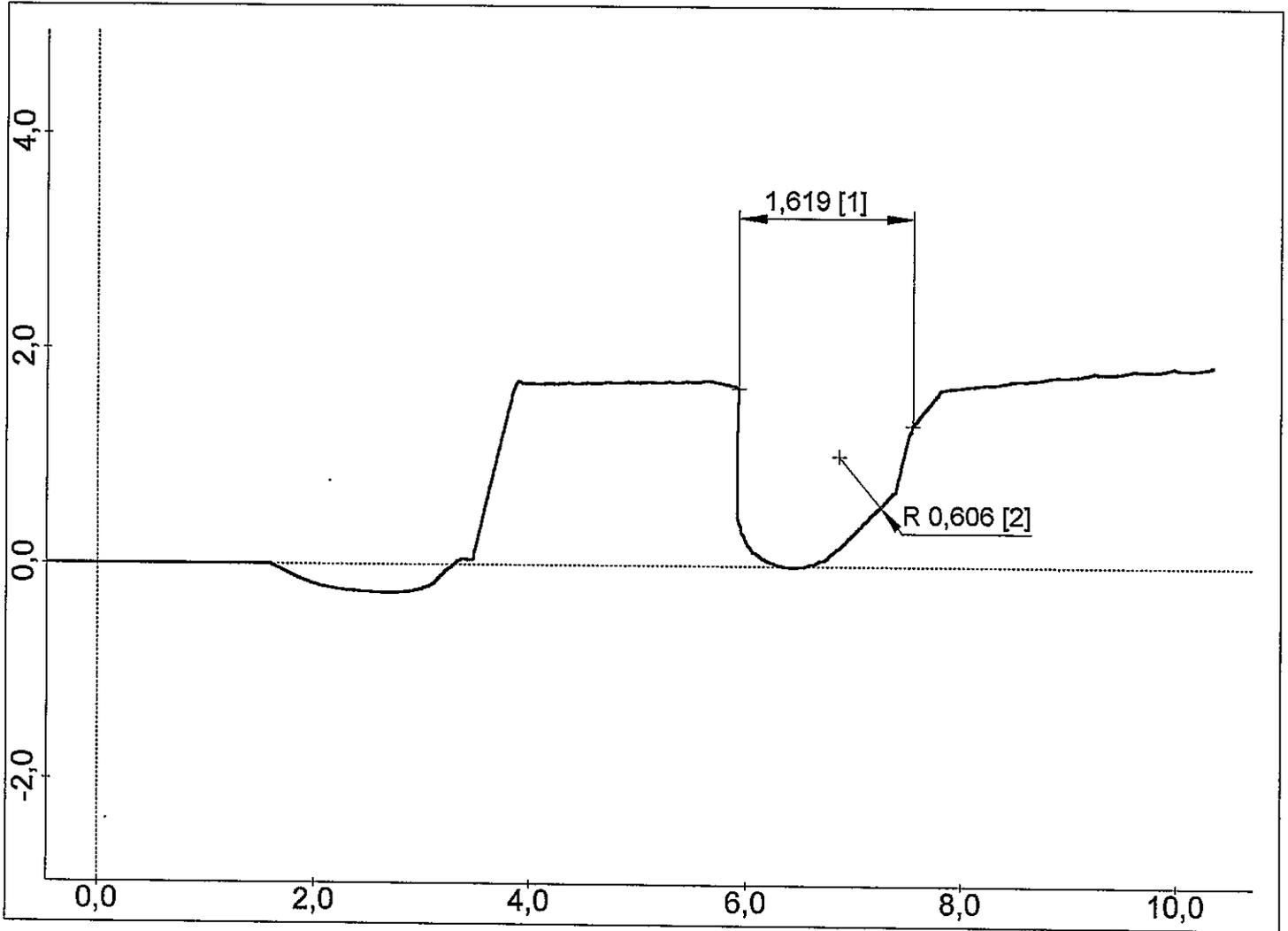
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Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N 3
Operatore: TURNO B
Data, ora: 11.10.2017, 12:19
Nota: PART W (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

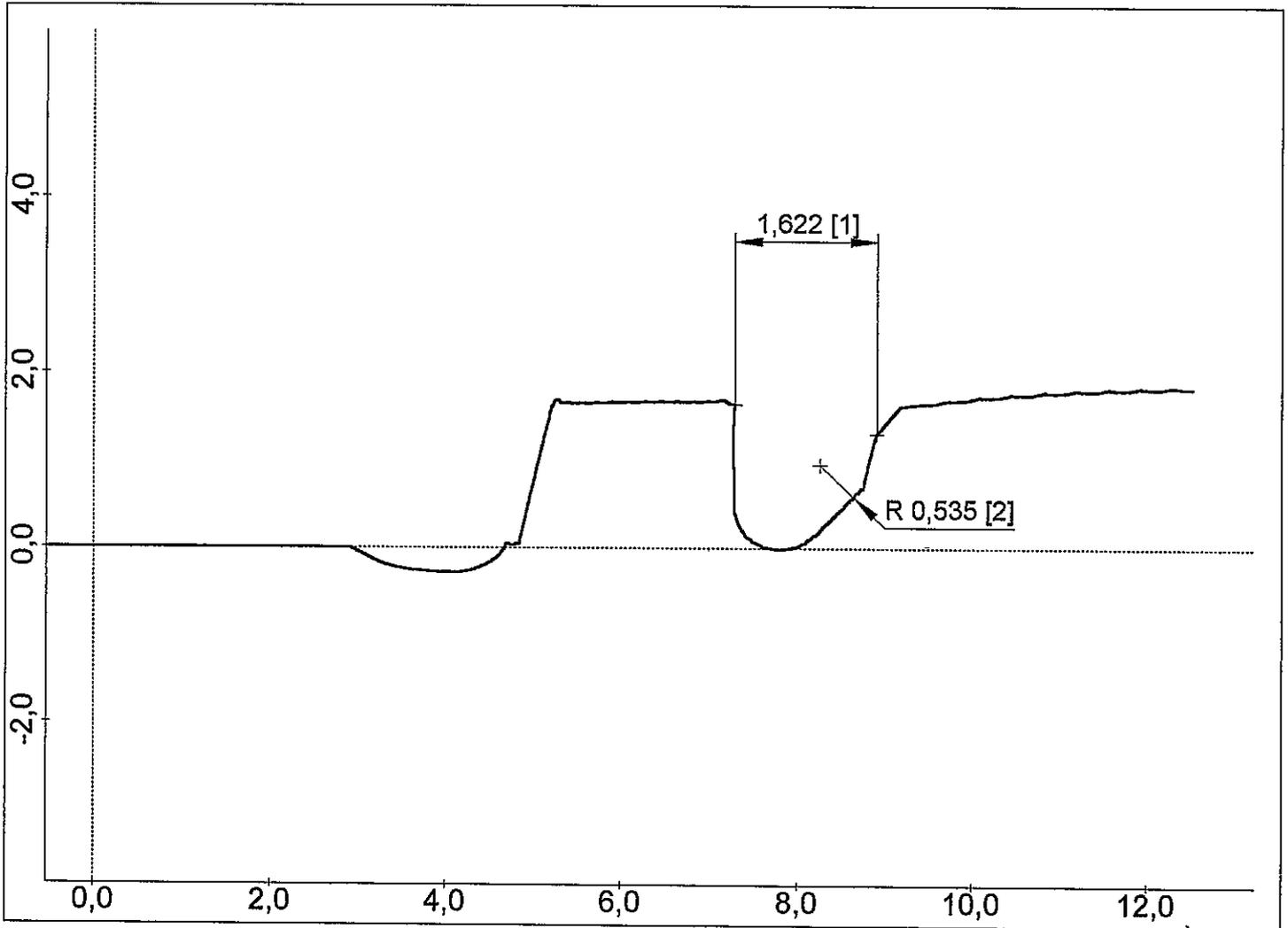
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Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N 4
Operatore: TURNO B
Data, ora: 11.10.2017, 12:25
Nota: PART W (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

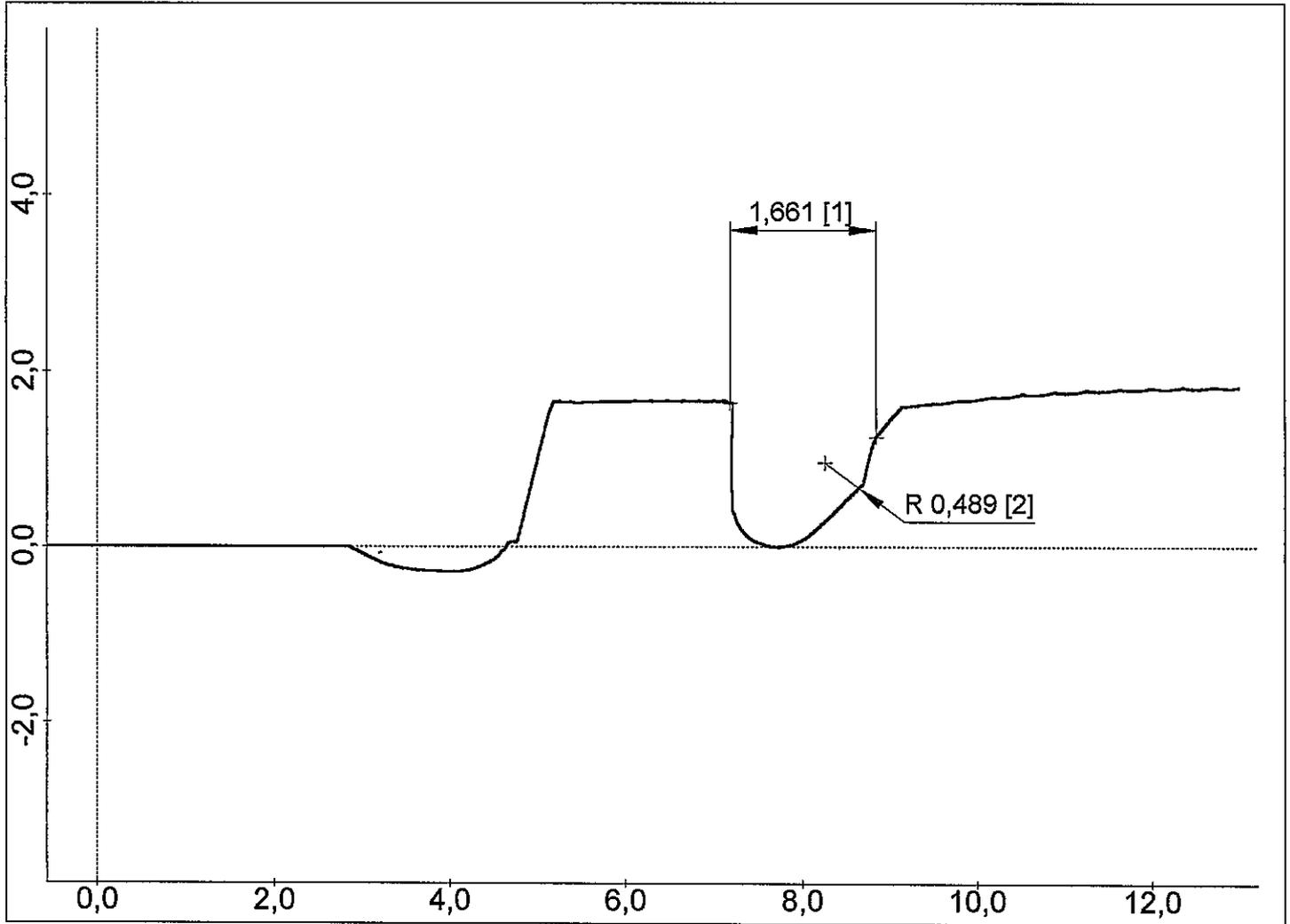
N°BADGE ODP RICEVENTE



Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N 5
Operatore: TURNO B
Data, ora: 11.10.2017, 12:31
Nota: PART W (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

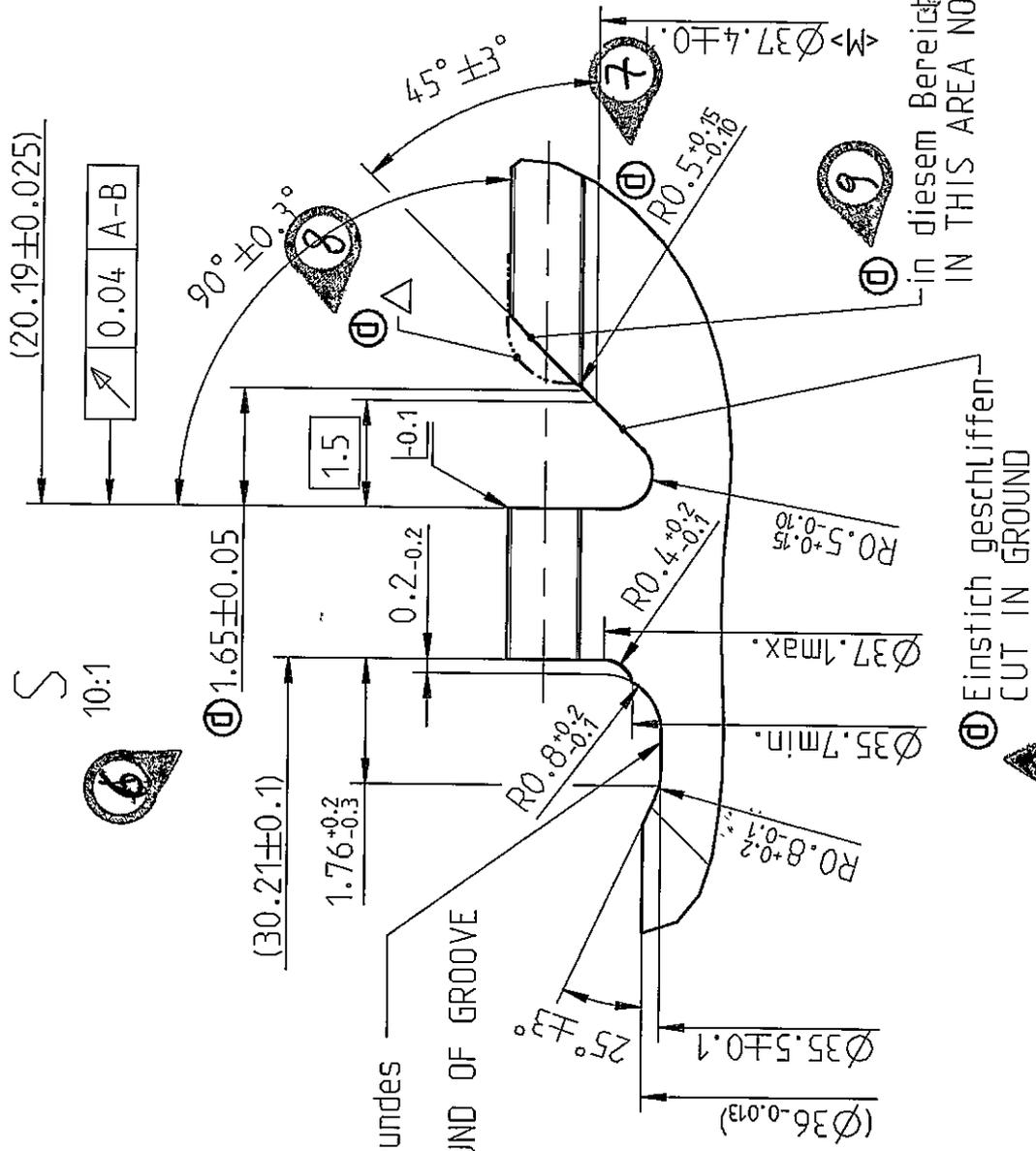
Valutazione Profilo

OK

NOK

N°BADGE ODP RICEVENTE

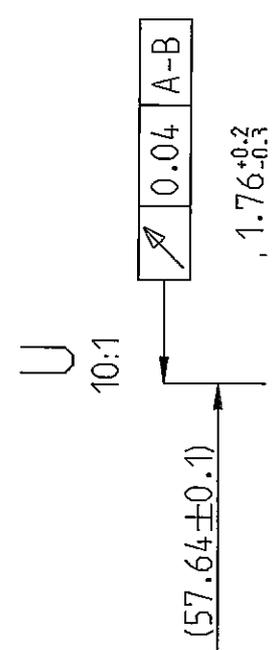
OPTIONAL



Anschleifen des Nutgrundes
nicht zulässig
MACHINING INTO GROOVE
IS NOT ALLOWED

in diesem Bereich nicht geschliffen
IN THIS AREA NOT GROUND

Einsteich geschliffen
CUT IN GROUND



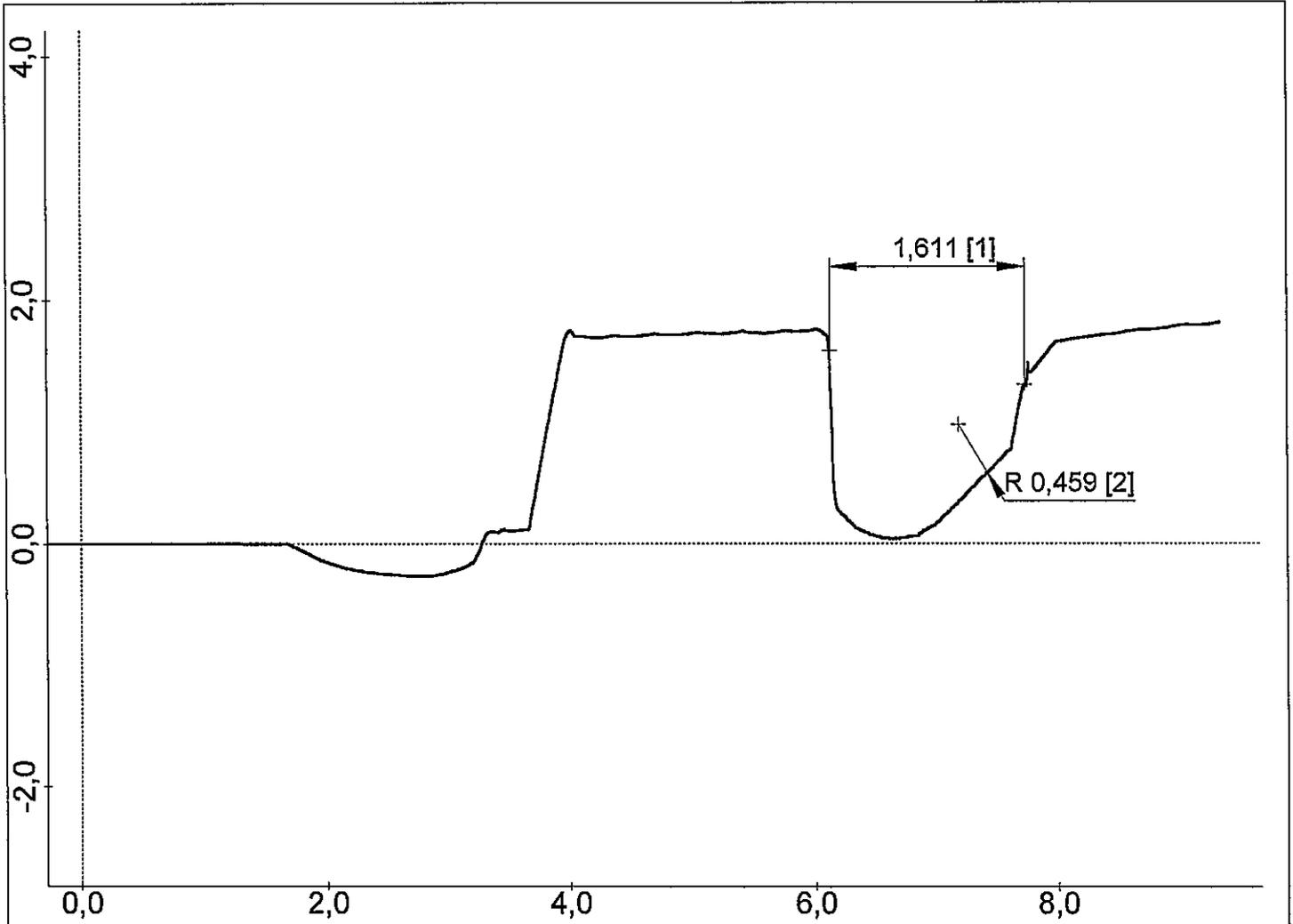
1.77.5±0.2



Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 M PZ N. 1
Operatore: TURNO B
Data, ora: 11.10.2017, 10:38
Nota: PART S (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

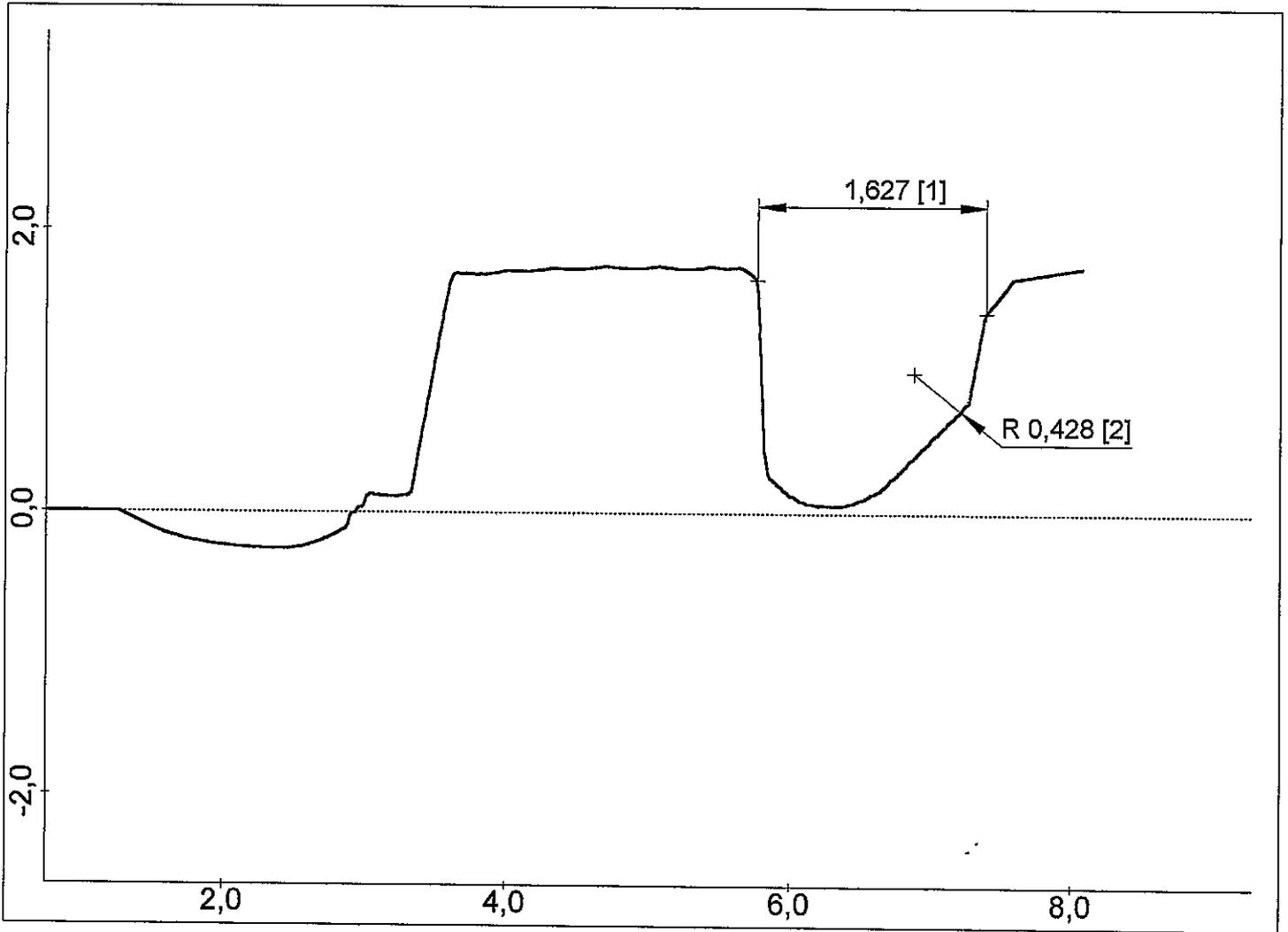
Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

N°BADGE ODP RICEVENTE



PERTHOMETER CONCEPT

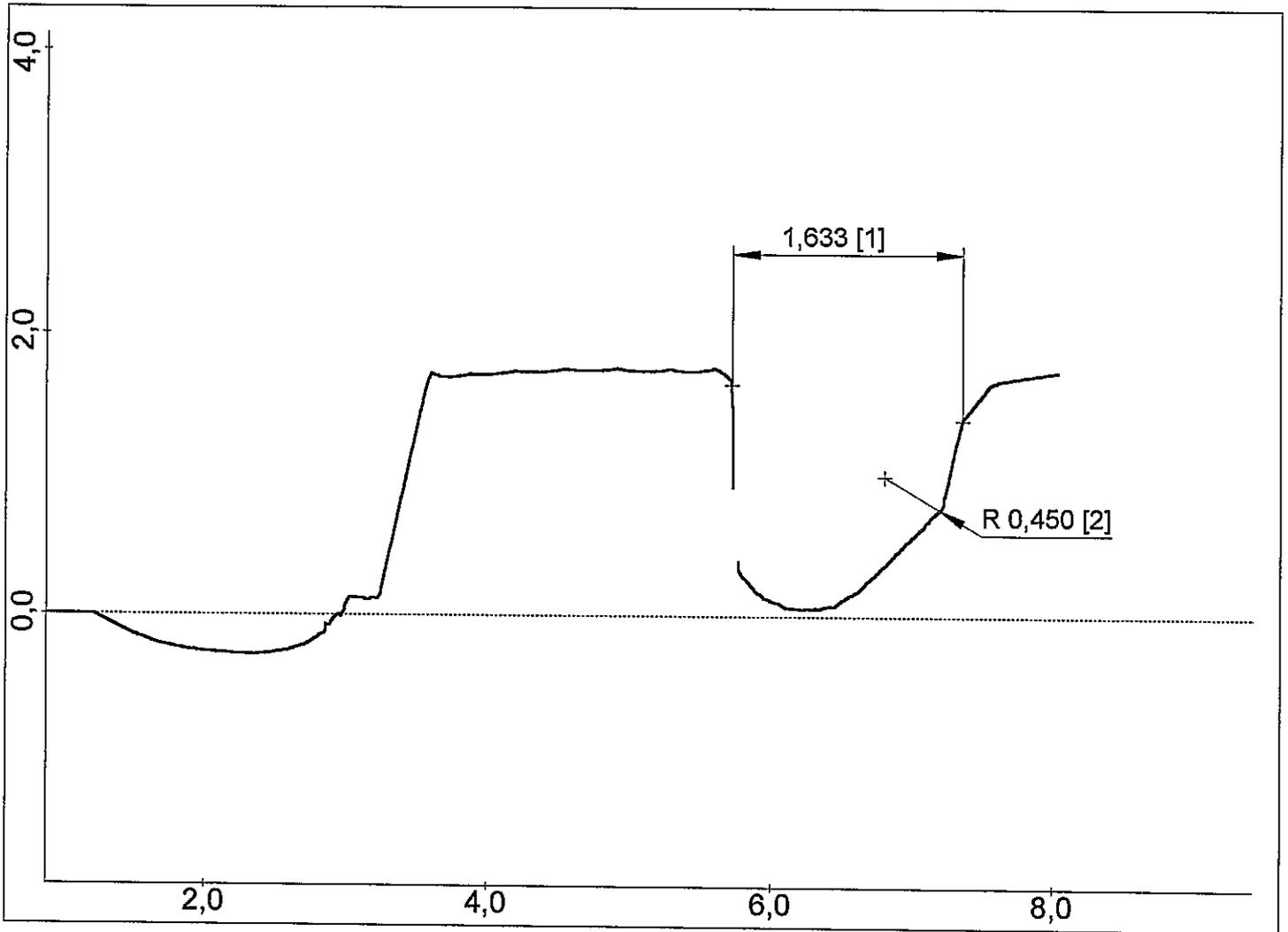
Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

N°BADGE ODP RICEVENTE



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

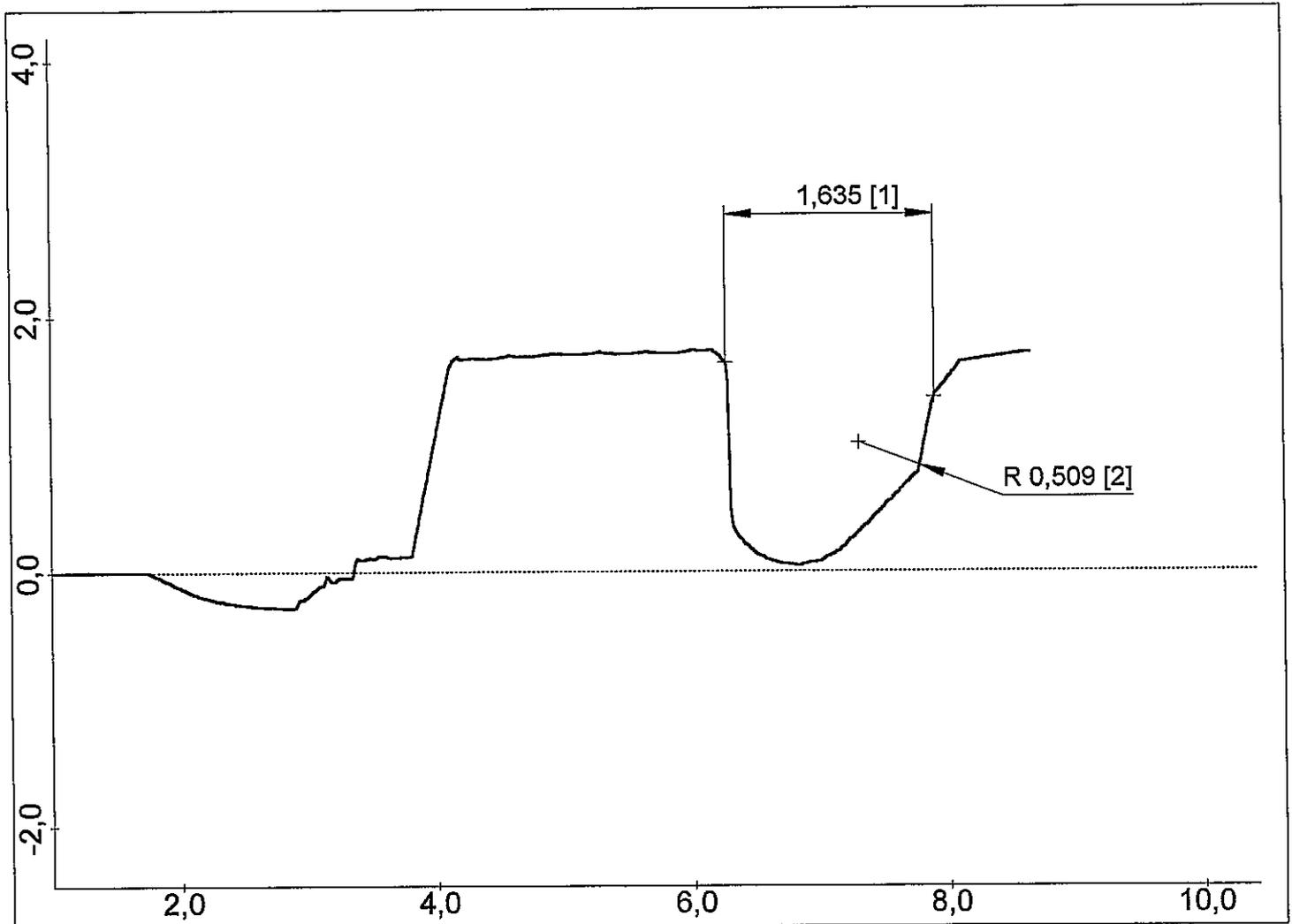
N°BADGE ODP RICEVENTE



Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N. 4
Operatore: TURNO B
Data, ora: 11.10.2017, 11:07
Nota: PART S (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

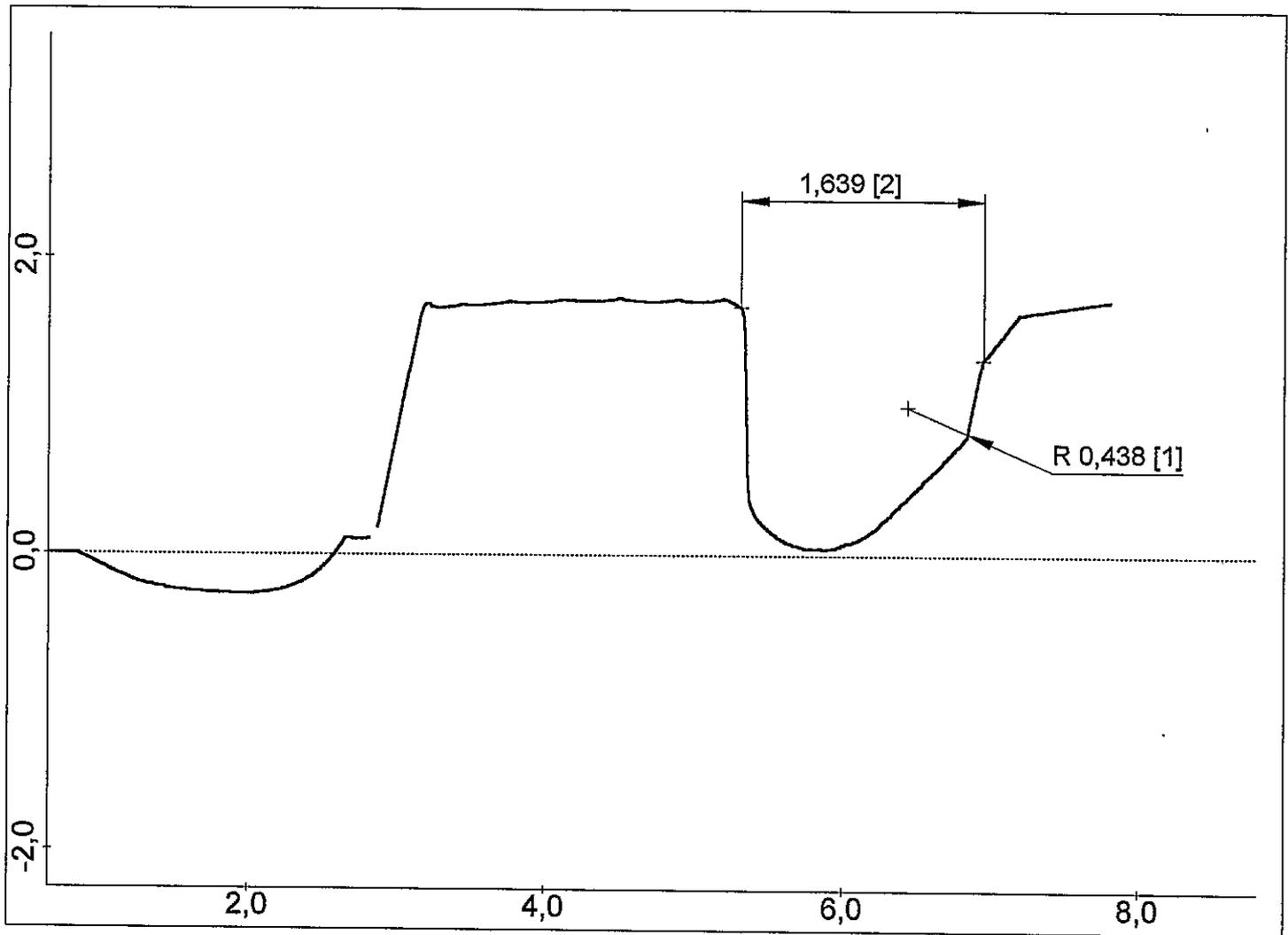
N°BADGE ODP RICEVENTE



Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N. 5
Operatore: TURNO B
Data, ora: 11.10.2017, 11:13
Nota: PART S (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

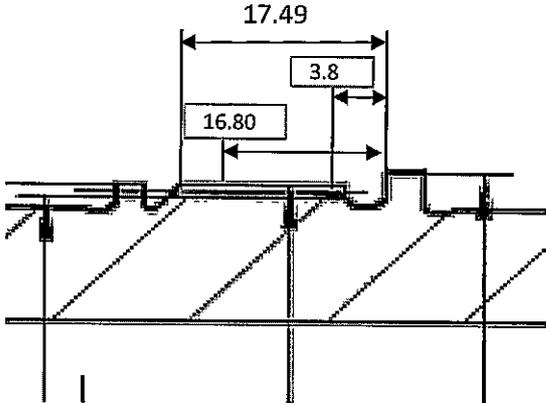
Valutazione Profilo

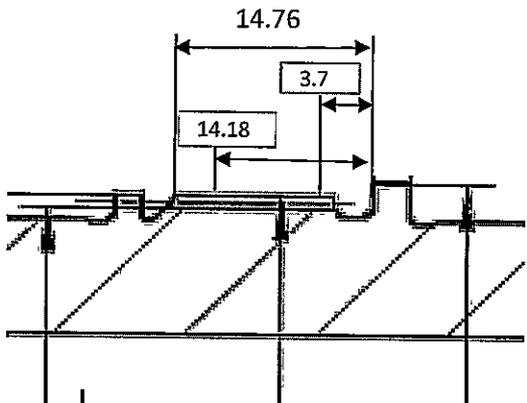
OK

NOK

N°BADGE ODP RICEVENTE

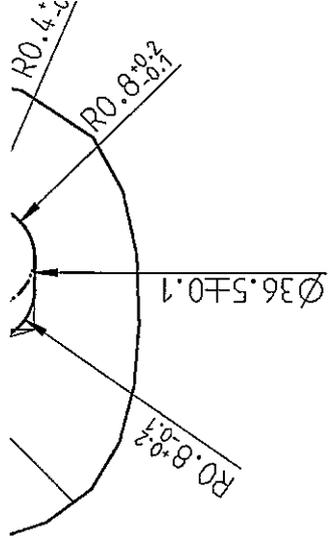
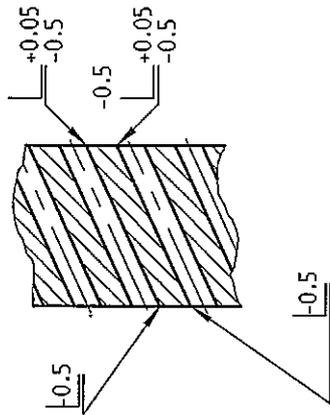
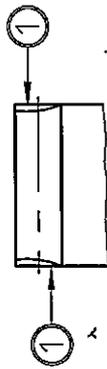
Released by Fabrizio.Cricenti on 2017-07-24
Document Status: approved

| | | | | | | | | | |
|--|--|-------------------------------------|--|-----------------------------------|----------------------|---------------------------------------|--------|---------------------------------------|--|
| GETRAG | | Geardata-Sheet | | | D-No.: 251.6.1076.35 | | z = 38 | | |
| External gearing | | | | Remark: IIIa | | | | | |
| Mating gear: ./. | | i 38 / 38 | | a ./. | | Type: 251 | | Speed: OS1 | |
| | | i / | | a | | Customer: RSA | | | |
| z 38 | | m _n 1.000000 | | α 30 ° 0 ' 0 " | | β 0 ° 0 ' 0 " | | STRAIGHT | |
| x 0.450 | | d 38.000 | | d _b 32.909 | | d _a 39.89 _{-0.25} | | d _f 37.80 _{-0.59} | |
| Tolerance Class 9.3 | | | | Tooth thickn. sn 2.156 ÷ 2.124 | | | | | |
| GO-GAGE takes priority over inspection of individual deviations | | | | Base tangent length over 7 teeth | | | | | |
| Radial composite err. Fi'' | | Tang. comp. err. Fi' | | finished: 19.961 ÷ 19.933 | | | | | |
| Rad. tooth to tooth comp. err. fi'' | | Tang. tooth to tooth comp. err. fi' | | shaped: ÷ hobbed: ÷ | | | | | |
| Profile form error ffa | | Profile angle error fHα | | shaved: ÷ | | | | | |
| Total profile error Fα 0.021 | | Adjacent pitch err. fp 0.017 | | Measurement over 2 balls DM= 2.00 | | | | | |
| Normal pitch error fpe | | Diff. bet. adj. pitch. fu | | finished: 42.132 ÷ 42.083 | | | | | |
| Cumulative pitch error Fp 0.040 | | Cum. circ. pitch err. Fpk | | shaped: ÷ hobbed: ÷ | | | | | |
| Cum. circ. pitch err. 1/8 extent Fpz/8 | | Radial run-out Fr 0.050 | | shaved: ÷ | | | | | |
| Range of tooth thickn. error Rs | | Longit. alignm. err. ffb | | usable diameter dNa 39.64 | | dNf 37.94 | | | |
| Tooth alignment err. fHβ | | Total alignment err. Fβ 0.011 | | rad. of curvature pdNa 11.05 | | pdNf 9.44 | | | |
| Tool | | Bezugsprofil | | DIN 5480 | | | | | |
| grinding wheel | | h _{aP0} | | ρ _{aP0} | | b | | | |
| <p>External spline DIN 5480-W 40 x 1.00 x 38 x (Tol.Class similar 9.3) v</p> <p>GAGE DIMENSION sn max. eff. = 2.190</p> <p>da NON STANDARD</p>  <p>In measurement planes 3.8 und 16.80 podNa min = 10.70 allowed</p> | | | | | | | | | |
| b | | C010006 | | siehe CR | | 20170724 | | Cricenti | |
| a | | C006834 | | siehe CR | | 16.01.17 | | Hartmann | |
| Ch.ind. | | Ch. No. | | Changes | | Date | | Name | |
| VBL created: CRICENTI Date: 2015-12-04 Subst. for: | | | | | | | | | |

| | | | | | |
|--|------------------------------------|----------------------------------|-------------------------------|------------------------------|--------------------|
| GETRAG | | Verzahnungsblatt | | Z-Nr.: 251.6.1076.35 | z = 43 |
| Aussen - Verzahnung | | | | Remark: | Ila |
| Gegenrad: ./. | | i 43 / 43 | a ./. | Type: 251 | Gang: Abtr.welle 1 |
| | | i / | a | Besteller: Renault | |
| z 43 | m_n 1.000000 | α 30 ° 0 ' 0 " | β 0 ° 0 ' 0 " | GERADE | |
| x -0.050 | d 43.000 | d_b 37.239 | d_a 43.89 _{-0.25} | d_f 41.80 _{-0.59} | |
| Toleranzklasse 9.3 | | | Zahndicke sn 1.577 | ÷ 1.545 | |
| Gutlehre hat Priorität gegenüber Prüfung der Einzelabweichungen | | | Zahnweite Wk über k = 8 Zähne | | |
| Zweifl.-Wälzabw. Fj " | Einfl.-Wälzabw. Fi ' | fertig: | | 22.412 ÷ 22.385 | |
| Zweifl.-Wälzsprung fi " | Einfl.-Wälzsprung fi ' | gestoßen: | | ÷ | |
| Profil-Formabw. ffa | Profil-Winkelabw. fH α | geschliffen: | | ÷ | |
| Profil-Gesamt abw. F α 0.021 | Teilungs-Einzelabw. fp 0.017 | Diam. Zweikugelm. MdK, DM = 2.00 | | | |
| Eingriffsteilu.-Abw. fpe | Teilungssprung fu | fertig: | | 46.210 ÷ 46.159 | |
| Teilungs-Ges.abw. Fp 0.040 | Teilungs-Span.abw. Fpk | gestossen: | | ÷ | |
| Teilungs-Span.abw. Fpz/8 | Rundlaufabw. Fr 0.050 | geschliffen: | | ÷ | |
| Zahndickenschwa. Rs | Flankenl.-Formabw. ffb | Nutzkreise dNa | 43.64 | dNf | 41.94 |
| Flankenl.-Winkelabw. fh β | Flankenl.-Ges.abw. F β 0.011 | Messstrecken pdNa | 11.38 | pdNf | 9.65 |
| Werkzeug | Bezugsprofil | DIN 5480 | haP0 = | | |
| Schleifscheibe | h _{aP0} | p _{aP0} | b | | |
| Zahnwelle DIN 5480-W 44 x 1.00 x 43 x (Tol.Klasse ähnlich 9.3) v | | | | | |
| Lehrenmaß sn max. eff. = 1.613 | | | | | |
|  | | | | | |
| In Messebene 14.18 und 3.7 podNa min = 11.00 zulässig | | | | | |
| b | C010006 | siehe CR | 24.07.17 | Cricenti | |
| a | C006834 | siehe CR | 16.01.17 | Hartmann | |
| Buchst. | Änd.-Nr. | Änderung | Datum | Name | |
| VBL erstellt: CRICENTI Datum: 2015-12-04 Ersatz für: | | | | | |

Kanten an Laufverzahnungen / Tooth chamfers

unmassstäblich / not to scale



① VERZÄHNING OPTIONAL ENTGRÄTET NACH G_908101 / CHAMFERING OPTIONAL ON GEAR ACC. TO G_908101
FORM SD - Grösse siehe FORM SD - Size SEE

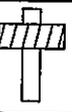
| | | IIa | IIb | IIIa | IIIb | IIIc | IIId |
|--|--------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | | da normabweichend NON STANDARD |
| Aussenverzahnung / EXTERNAL GEAR | | | | | | | |
| Zahnwelle / SPLINE DATA EXTERNAL | | | | | | | |
| Bezugsdurchmesser / REFERENCE DIAMETER d_b | | 44.000 | 44.000 | 44.000 | 44.000 | 40.000 | 40.000 |
| Modul / NORMAL MODULE m_n | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Zahnezahl / NUMBER OF TEETH z | | 43 | 43 | 43 | 38 | 38 | 38 |
| Eingriffswinkel / NORMAL PRESSURE ANGLE α_n | | 30.0° | 30.0° | 30.0° | 30.0° | 30.0° | 30.0° |
| Schraubungswinkel / HELIX ANGLE β | | 0° | 0° | 0° | 0° | 0° | 0° |
| Richtung / HAND OF HELIX | LEFT, links | STRAIGHT, gerade |
| Bezugsprofil / BASIC RACK | | DIN 5480 |
| Profilverschiebung/ADDENDUM MODIFICATION $x \cdot m_n$ | Nennmass / NOMINAL | -0.050 | -0.050 | -0.050 | -0.050 | 0.450 | 0.450 |
| Qualität / GEAR TOOTH QUALITY (DIN3961) | | 8 | | | | | |
| Toleranzklasse / TOLERANCE CLASS | | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 | 9.3 |
| Zahndicke / TOOTH THICKNESS s_n (Lehnenmass / GAGE DIMENSION) | effective max | $\textcircled{M} <M> 1.613$ | 1.481 | 1.481 | 1.481 | $\textcircled{M} <M> 2.190$ | 2.058 |
| | max. | 1.577 | 1.455 | 1.455 | 1.455 | 2.156 | 2.032 |
| | min. | 1.545 | 1.410 | 1.410 | 1.410 | 2.124 | 1.987 |
| Messkugel- ϕ / BALL DIA D_M | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Prüfmass / MEASUREMENT OVER BALLS M_{gk} (Einzelmessung / ACTUAL) | max. | $\textcircled{M} 46.210$ | 46.013 | 46.013 | 46.013 | $\textcircled{M} 42.132$ | 41.943 |
| | min. | $\textcircled{M} 46.159$ | 45.940 | 45.940 | 45.940 | $\textcircled{M} 42.083$ | 41.874 |



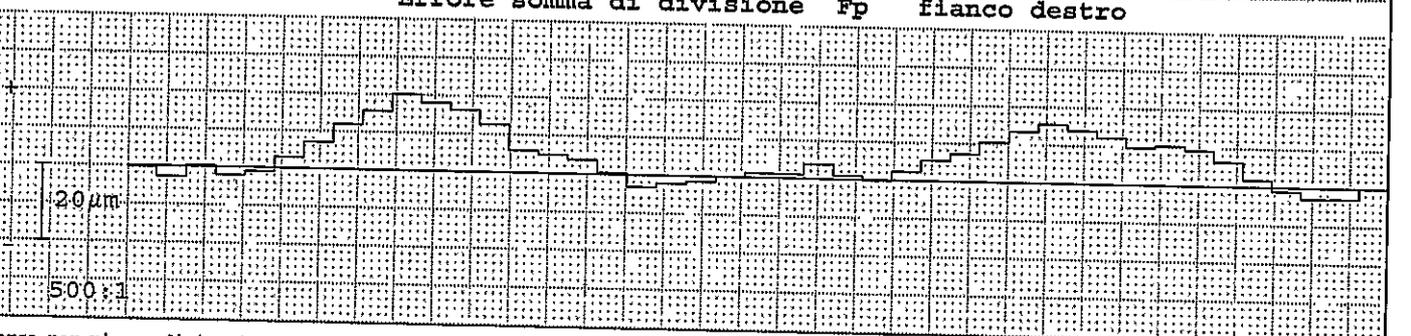
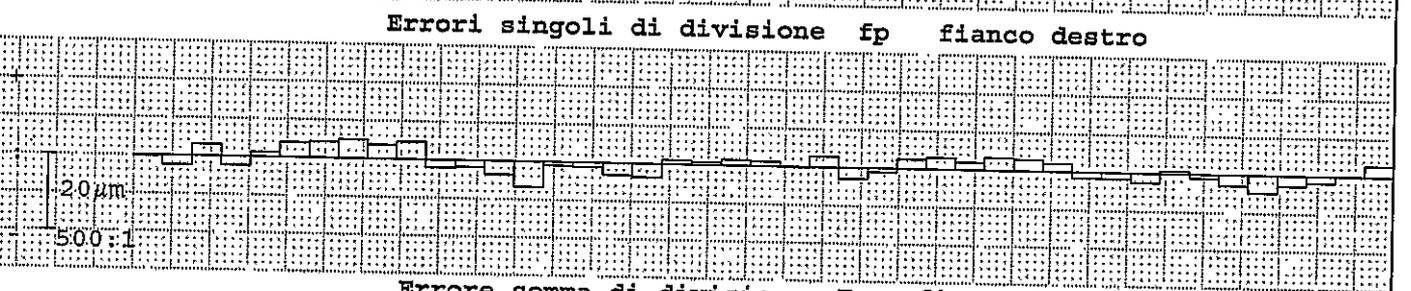
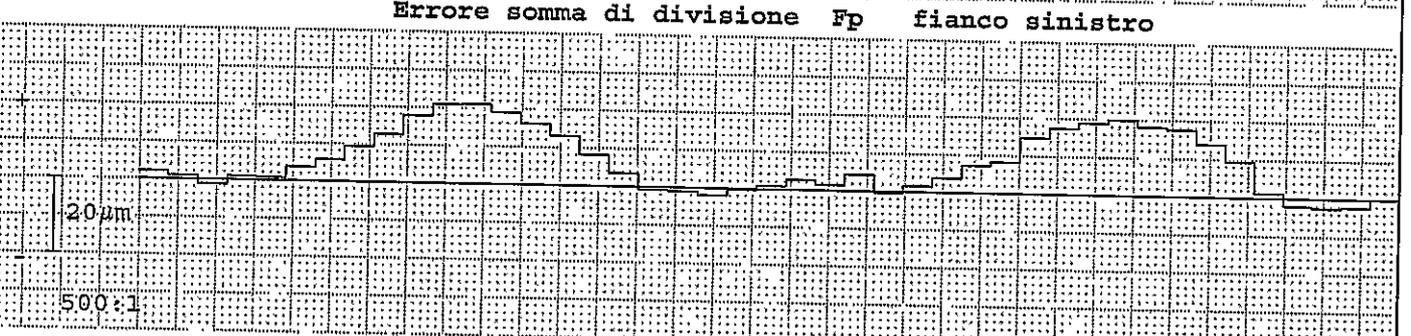
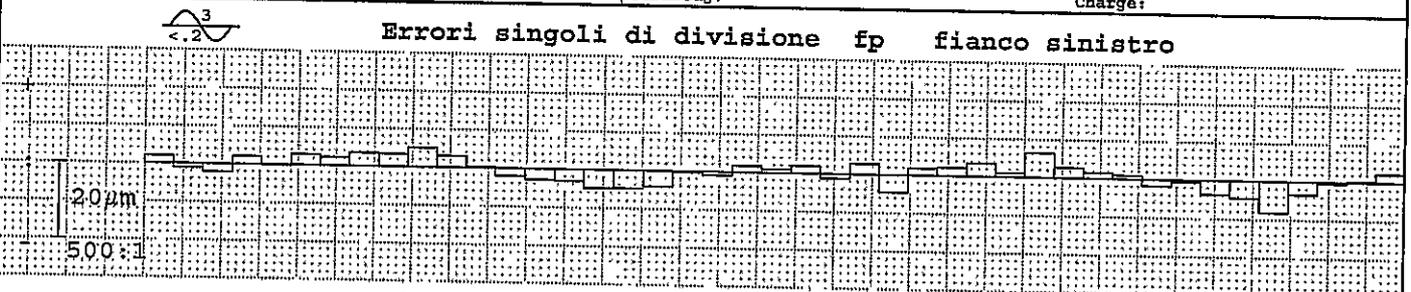
Ø37.6-0.4

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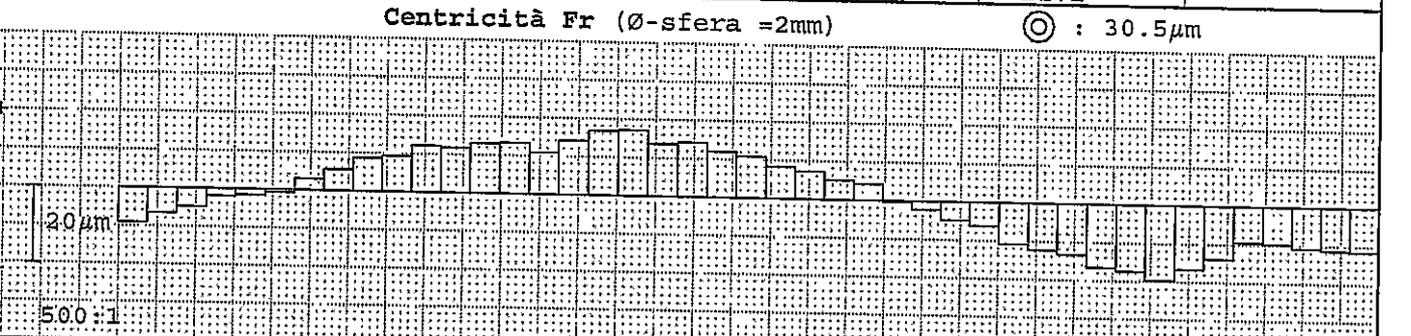
Ruota cilindrica Divisione



| | | | |
|-----------------------------------|--------------------|--------------------------------------|-------------------------|
| Nr. prog.: STI0412_06_0 | P26 601265 | Controllore: turno C | Data: 11.10.2017 12:42 |
| Denominazione: Output Shaft 1 | Numero denti z: 43 | Angolo pressione: 30°00'00" | Angolo elica: 00°00'00" |
| Numero disegno: D51.6.1076.RIIa H | Modulo m: 1mm | Untersuchungszweck: Laufende Messung | |
| Comessa/serie nr.: pz n.1 | Spindel: FORM 047 | Charge: | |
| Masch.Nr.: M001 | Spindel: FORM 047 | | |



| | | | | | | | | |
|---|------------|-----------------|----------|---------------|------------|-------|----------|-------|
| Corso per misura divis.: 43.096 z=5,8mm | | fianco sinistro | | fianco destro | | | | |
| Gr. err. singoli divisione fp max | Val. misur | Qual. | Val. amm | Qual. | Val. misur | Qual. | Val. amm | Qual. |
| Gr. salto di passo fu max | 8.2 | | 17.0 | | 6.7 | | 17.0 | |
| Scarto di divisione Rp | 7.4 | | | | 6.6 | | | |
| Err. globale di divisione Fp-s | 14.7 | | | | 11.5 | | | |
| Err. cordale di divisione Fpz/8 | 23.5 | | 40.0 | | 23.2 | | 40.0 | |
| | 20.2 | | | | 21.1 | | | |

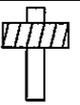


| | | | | |
|---------------------------|------|------|-----------------------------|----------------------------|
| Err. di concentricità Fr | 36.7 | 50.0 | MQR 46.107 [mm] / Sfere-Ø:2 | |
| Variab. spessore dente Rs | | | Val. amm | 46.21 46.159 |
| | | | Val | 46.188 46.199 46.199 |

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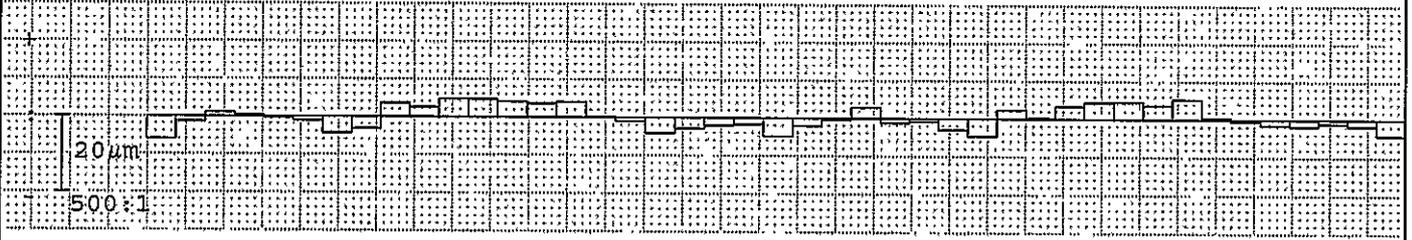
Ruota cilindrica Divisione



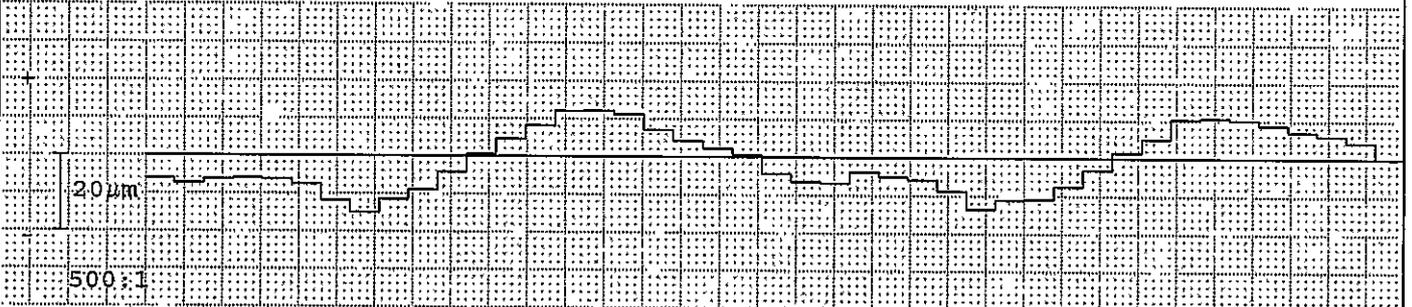
| | | | |
|------------------------------------|--------------------------------------|-----------------------------|------------------------|
| Nr. prog.: STI0412 06 0 | P26 601265 | Controllore: turno C | Data: 11.10.2017 12:45 |
| Denominazione: Output Shaft 1 | Numero denti z: 43 | Angolo pressione: 30°00'00" | |
| Numero disegno.: D51.6.1076.RIIa H | Modulo m: 1mm | Angolo elica: 00°00'00" | |
| Commessa/serie nr.: pz n.2 | Untersuchungszweck: Laufende Messung | | |
| Masch.Nr.: M001 | Spindel: Form | Gr. Zedg: | Charge: |



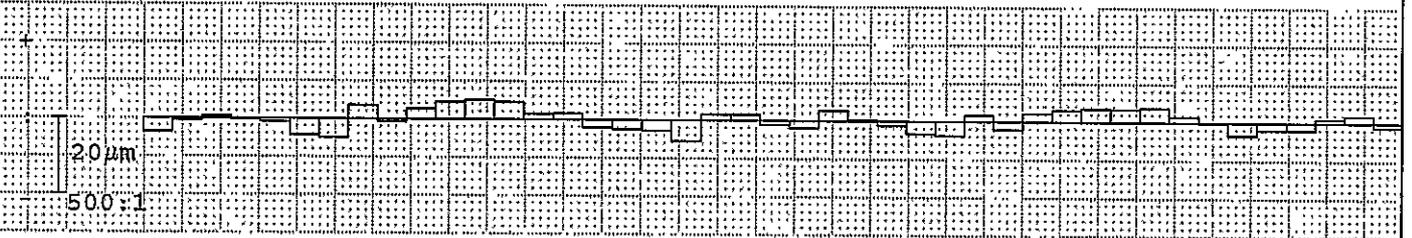
Errori singoli di divisione fp fianco sinistro



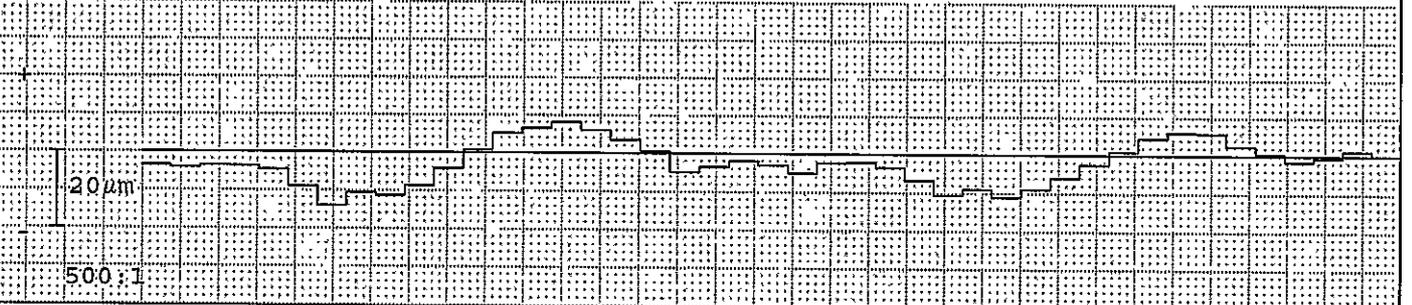
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro

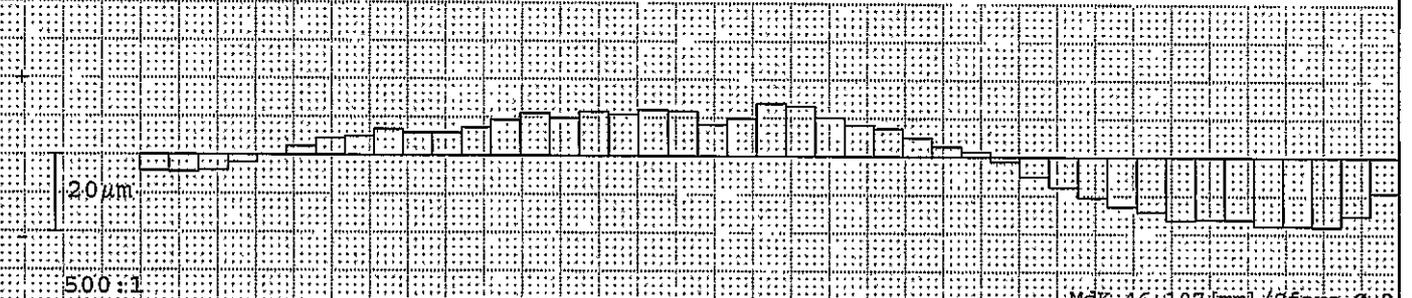


Errore somma di divisione Fp fianco destro



| | | fianco sinistro | | fianco destro | |
|----------------------------|--------|-----------------|-------|---------------|-------|
| | | Val. misur | Qual. | Val. amm | Qual. |
| Gr. err. singoli divisione | fp max | 6.0 | | 17.0 | |
| Gr. salto di passo | fu max | 7.0 | | 8.4 | 17.0 |
| Scarto di divisione | Rp | 11.2 | | 10.4 | |
| Err. globale di divisione | Fp-e | 27.1 | | 40.0 | 40.0 |
| Err. cordale di divisione | Fpz/8 | 21.2 | | 17.8 | |

Centricità Fr (Ø-sfera =2mm) ⊙ : 27.8µm

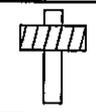


| | | | | Mdk 46.107 [mm] / Sfere-Ø 2 | |
|------------------------|----|----------|-------|-----------------------------|---------------|
| | | Val. amn | Qual. | Val. amn | Qual. |
| Err. di concentricità | Fr | 31.8 | | 46.21 | 46.159 |
| Variab. spessore dente | Rs | | 50.0 | 46.187 | 46.198 46.179 |

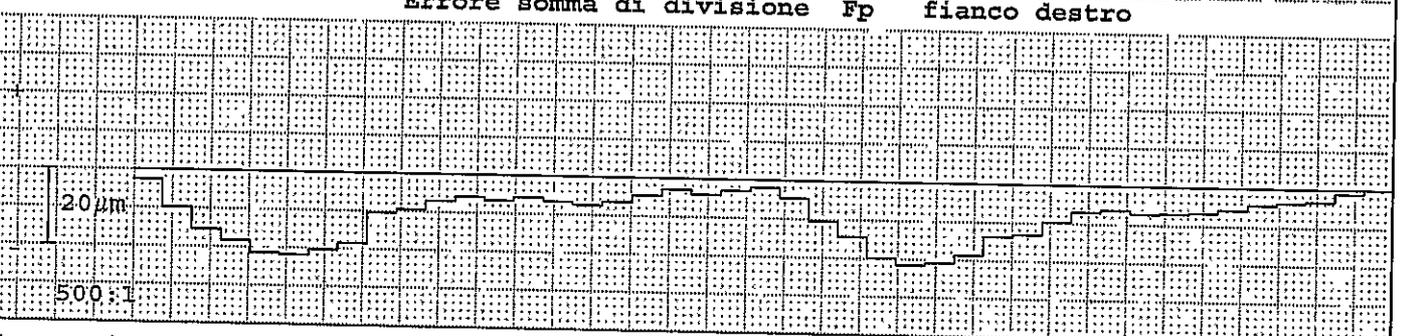
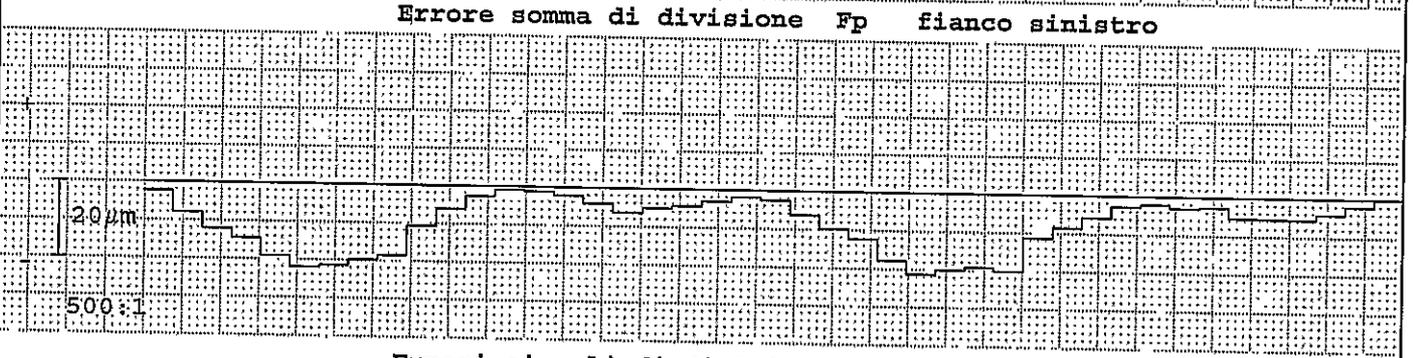


Docum. archiviato elettronicamente. Archiviazione cartacea non necessaria

Ruota cilindrica Divisione

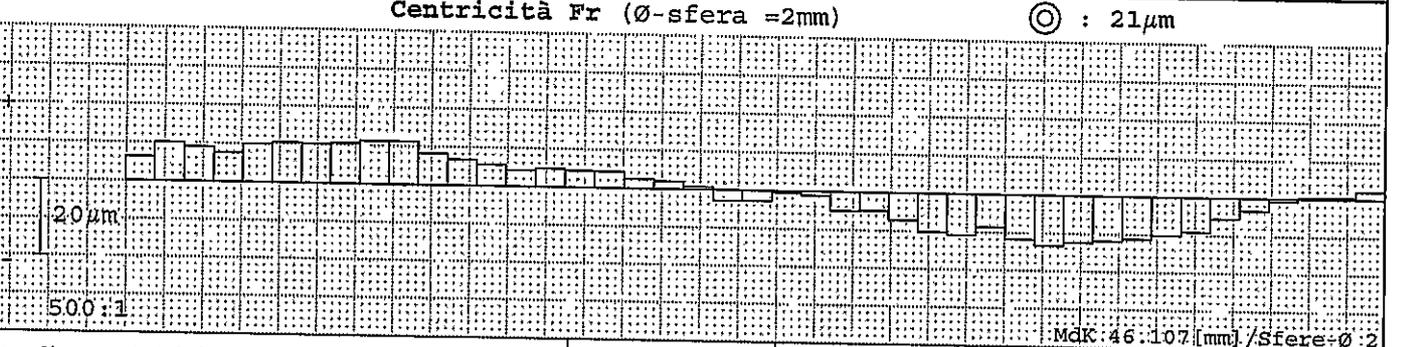


| | | | |
|-----------------------------------|--------------------|--------------------------------------|--------------------------|
| Nr. prog.: STI0412 06 0 | P26 601265 | Controllore: turno C | Data: 11.10.2017 12:47 |
| Denominazione: Output Shaft 1 | Numero denti z: 43 | Angolo pressione: 30°00'00" | Angolo elicca: 00°00'00" |
| Numero disegno: D51.6.1076.RIIa H | Modulo m: 1mm | Untersuchungszweck: Laufende Messung | |
| Comessa/serie nr.: pz n.3 | Masch.Nr.: M001 | | Charge: |
| Spindel: Formelwerkzeug: | | | |



Corsa per misura divis. 43.096 z=5,8mm

| | fianco sinistro | | | | fianco destro | | | |
|-----------------------------------|-----------------|-------|----------|-------|---------------|-------|----------|-------|
| | Val. misur | Qual. | Val. amm | Qual. | Val. misur | Qual. | Val. amm | Qual. |
| Gr. err. singoli divisione fp max | 8.9 | | 17.0 | | 8.1 | | 17.0 | |
| Gr. salto di passo fu max | 9.8 | | | | 7.1 | | | |
| Scarto di divisione Rp | 14.6 | | | | 15.3 | | | |
| Err. globale di divisione Fp-e | 22.0 | | 40.0 | | 21.9 | | 40.0 | |
| Err. cordale di divisione Fpz/8 | 19.7 | | | | 21.4 | | | |



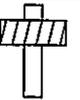
| | | | | | |
|---------------------------|------|------|----------|--------|--------|
| Err. di concentricità Fr | 24.6 | 50.0 | Val. amm | 46.21 | 46.159 |
| Variab. spessore dente Rs | | | Val. | 46.104 | 46.104 |

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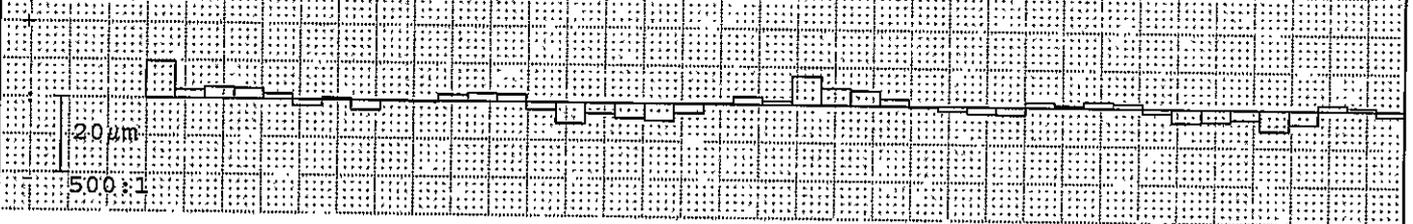
Ruota cilindrica Divisione



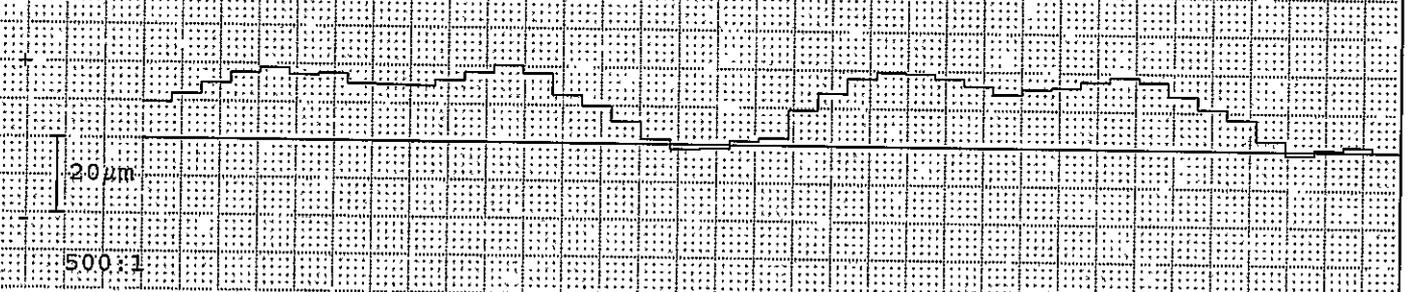
| | | | |
|-----------------------------------|--------------------|--------------------------------------|-----------------------------------|
| Nr. prog.: STI0412 06 0 | P26 601265 | Controllore: turno C | Data: 11.10.2017 12:50 |
| Denominazione: Output Shaft 1 | Numero denti z: 43 | Angolo pressione: 30°00'00" | Angolo elica: 00°00'00" |
| Numero disegno: D51.6.1076.RIIa H | Modulo m: 1mm | Untersuchungszweck: Laufende Messung | |
| Comessa/serie nr.: pz n.4 | Masch.Nr.: M001 | | Spindel: FORMER Werkzeug: Charge: |



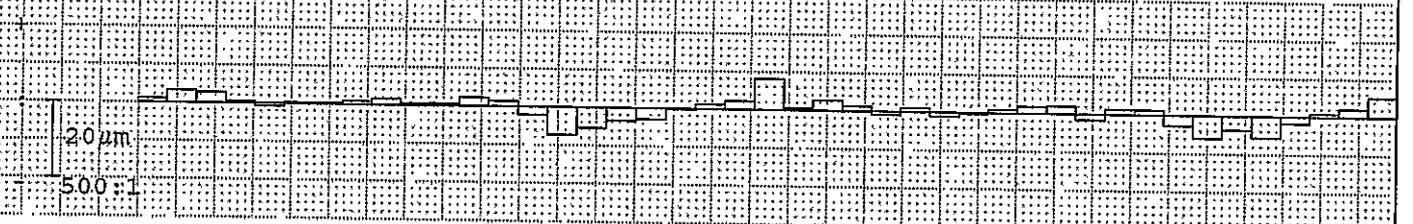
Errori singoli di divisione fp fianco sinistro



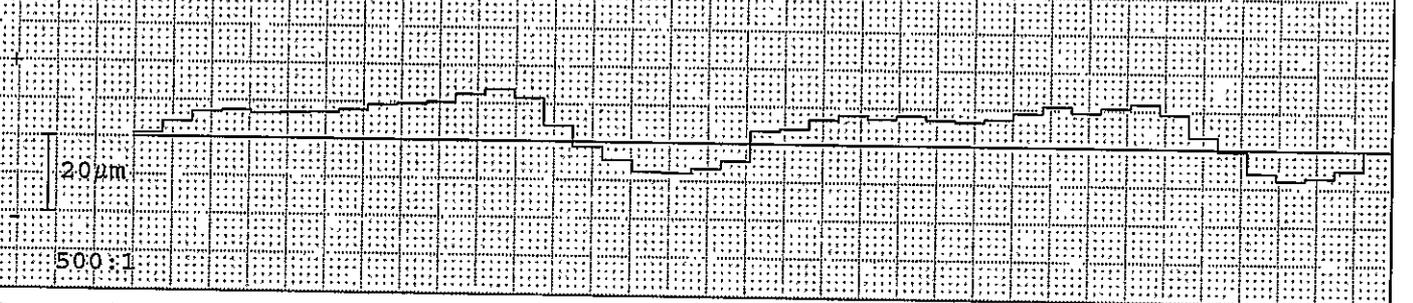
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro

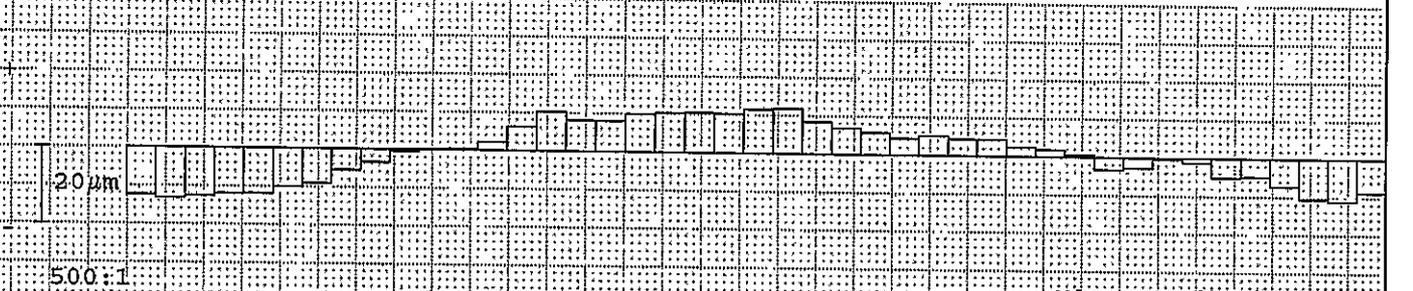


Errore somma di divisione Fp fianco destro



| | | | | | | | | | |
|---|--------|-----------------|-------|---------------|-------|------------|-------|----------|-------|
| Corso per misura divis.: 43.096 z=5.8mm | | fianco sinistro | | fianco destro | | | | | |
| | | Val. misur | Qual. | Val. amm | Qual. | Val. misur | Qual. | Val. amm | Qual. |
| Gr. err. singoli divisione | fp max | 9.7 | | 17.0 | | 8.1 | | 17.0 | |
| Gr. salto di passo | fu max | 11.0 | | | | 7.5 | | | |
| Scarto di divisione | Rp | 15.2 | | | | 15.4 | | | |
| Err. globale di divisione | Fp-e | 21.4 | | 40.0 | | 21.6 | | 40.0 | |
| Err. cordale di divisione | Fpz/8 | 19.4 | | | | 21.3 | | | |

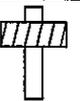
Centricità Fr (Ø-sfera =2mm) ⊙ : 21.3µm



| | | | | | | |
|------------------------|----|------|------|----------|--------|--------|
| Err. di concentricità | Fr | 24.9 | 50.0 | Val. amm | 46.21 | 46.159 |
| Variab. spessore dente | Ra | | | Val. | 46.187 | 46.198 |



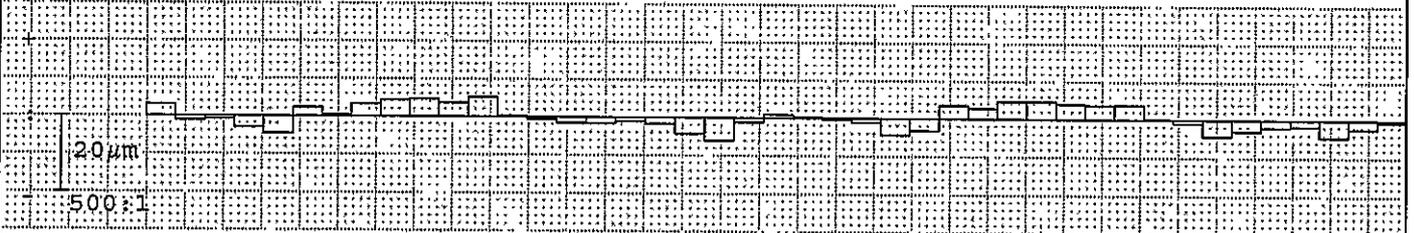
Ruota cilindrica Divisione



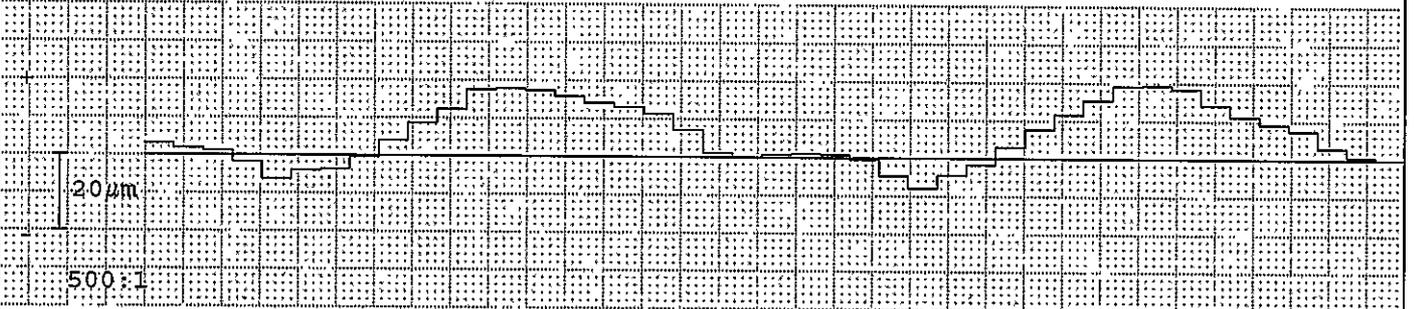
| | | | |
|------------------------------------|--------------------------------------|-----------------------------|------------------------|
| Nr. prog.: STI0412 06 0 | P26 601265 | Controllore: turno C | Data: 11.10.2017 12:54 |
| Denominazione: Output Shaft 1 | Numero denti z: 43 | Angolo pressione: 30°00'00" | |
| Numero disegno.: D51.6.1076.RIIa H | Modulo m: 1mm | Angolo elica: 00°00'00" | |
| Comessa/serie nr.: pz n.5 | Untersuchungszweck: Laufende Messung | | |
| Masch.Nr.: M001 | Spindel: Formm. 64 | Charge: | |



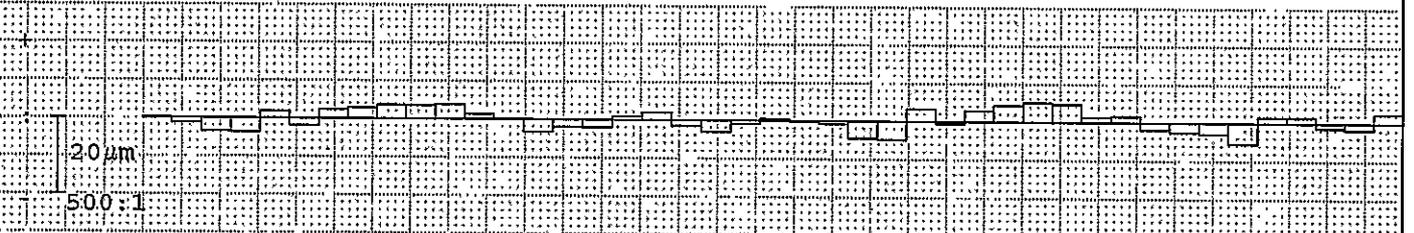
Errori singoli di divisione fp fianco sinistro



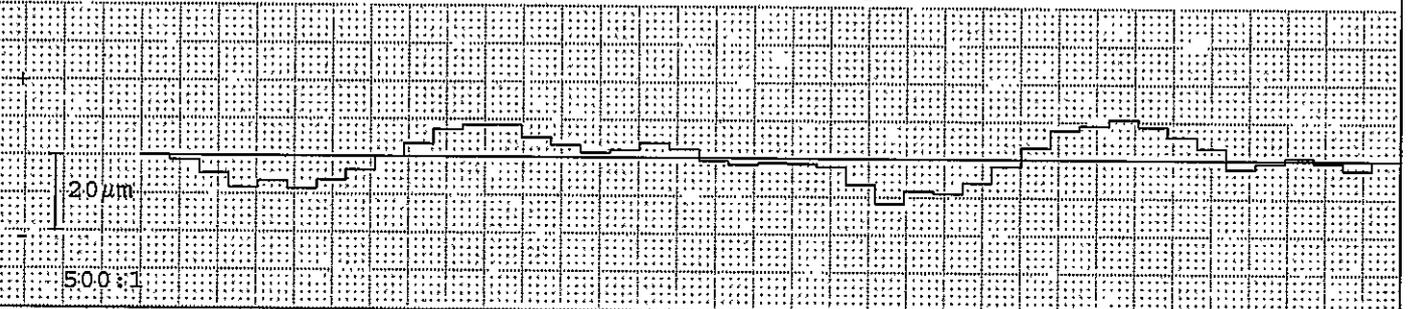
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro



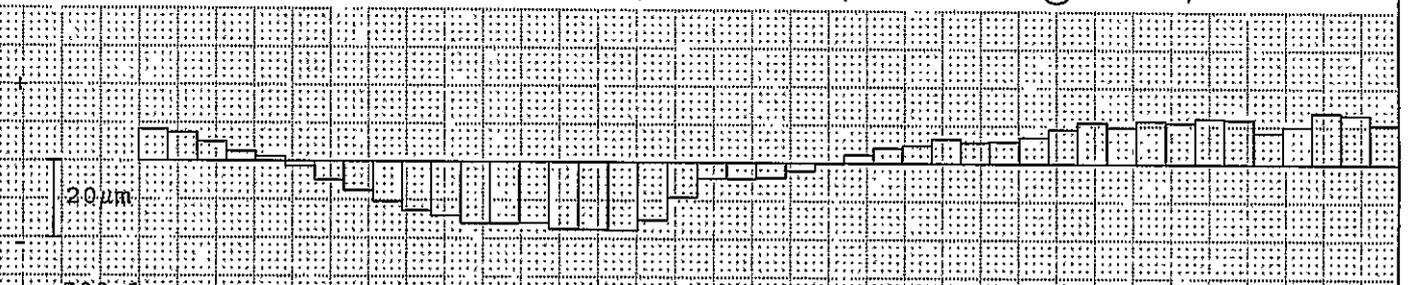
Errore somma di divisione Fp fianco destro



| | fianco sinistro | | | | fianco destro | | | |
|-----------------------------------|-----------------|-------|----------|-------|---------------|-------|----------|-------|
| | Val. misur | Qual. | Val. amm | Qual. | Val. misur | Qual. | Val. amm | Qual. |
| Gr. err. singoli divisione fp max | 6.0 | | 17.0 | | 5.5 | | 17.0 | |
| Gr. salto di passo fu max | 6.9 | | | | 8.2 | | | |
| Scarto di divisione Rp | 11.1 | | | | 10.5 | | | |
| Err. globale di divisione Fp-e | 27.3 | | 40.0 | | 22.4 | | 40.0 | |
| Err. cordale di divisione Fpz/8 | 21.1 | | | | 18.1 | | | |

Centricità Fr (Ø-sfera =2mm)

⊙ : 27.5µm

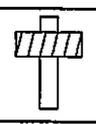


Mdk: 46.107 [mm] / Sfere-Ø: 2

| | | | | | |
|---------------------------|------|------|----------|--------|---------------|
| Err. di concentricità Fr | 31.4 | 50.0 | Val. amm | 46.21 | 46.159 |
| Variaz. spessore dente Rs | | | Val. | 46.187 | 46.198 46.178 |

Docum. archiviato elettronicamente. Archiviazione cartacea non necessaria

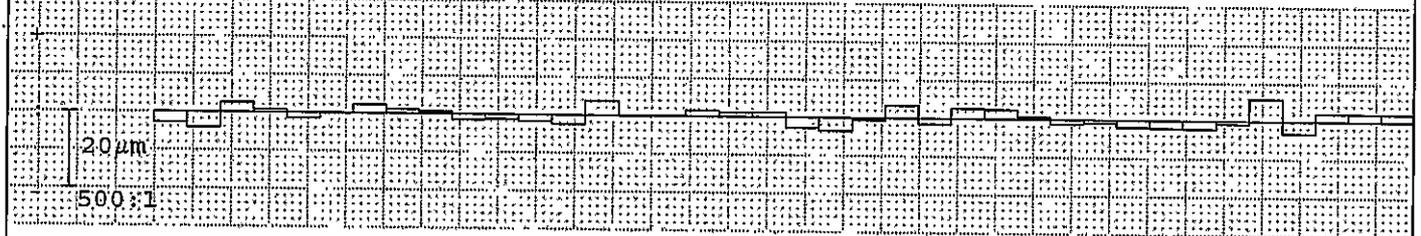
Ruota cilindrica Divisione



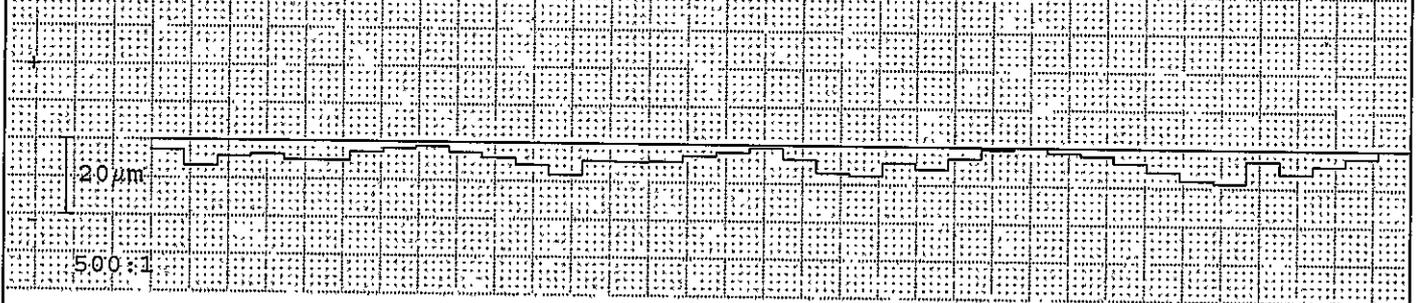
| | | | |
|-------------------------------------|-------------------------|--------------------------------------|----------------------------|
| Nr. prog.: STI0412 06 0 | P26 601265 | Controllore: turno C | Data: 11.10.2017 12:57 |
| Denominazione: Output Shaft 1 | | Numero denti z 38 | Angolo pressione 30°00'00" |
| Numero disegno: D51.6.1076.RIIIIa H | | Modulo m 1mm | Angolo elica 00°00'00" |
| Comessa/serie nr.: pz n.1 | | Untersuchungszweck: Laufende Messung | |
| Masch.Nr.: M001 | Spindel: Formelwerkzeug | | Charge: |



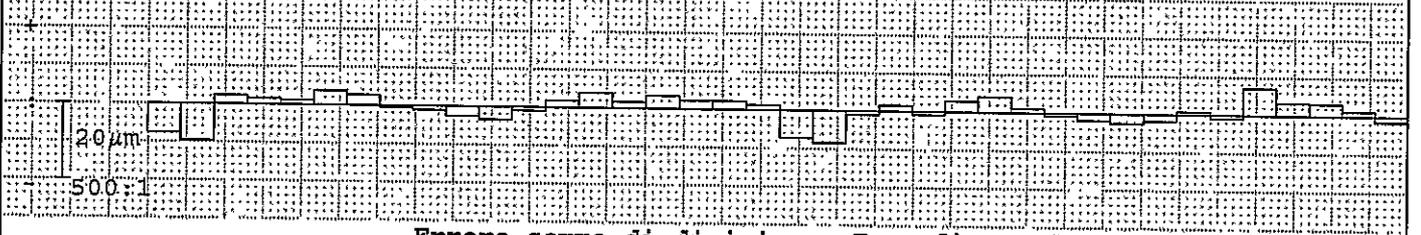
Errori singoli di divisione fp fianco sinistro



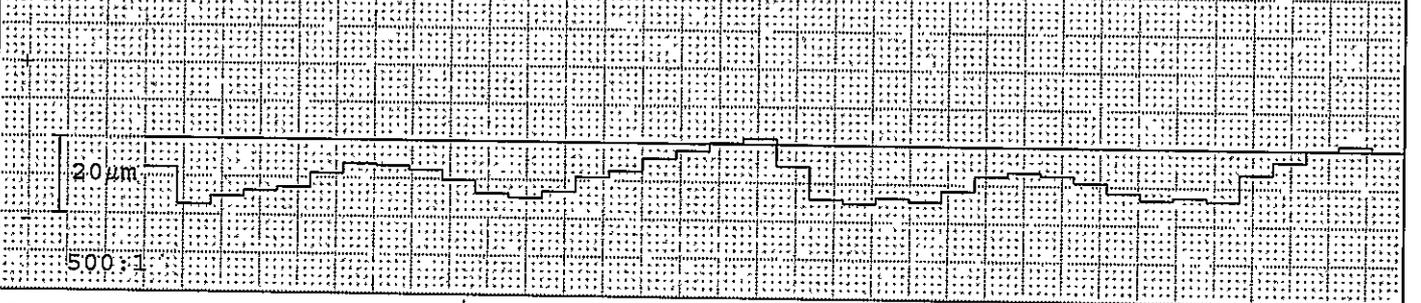
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro

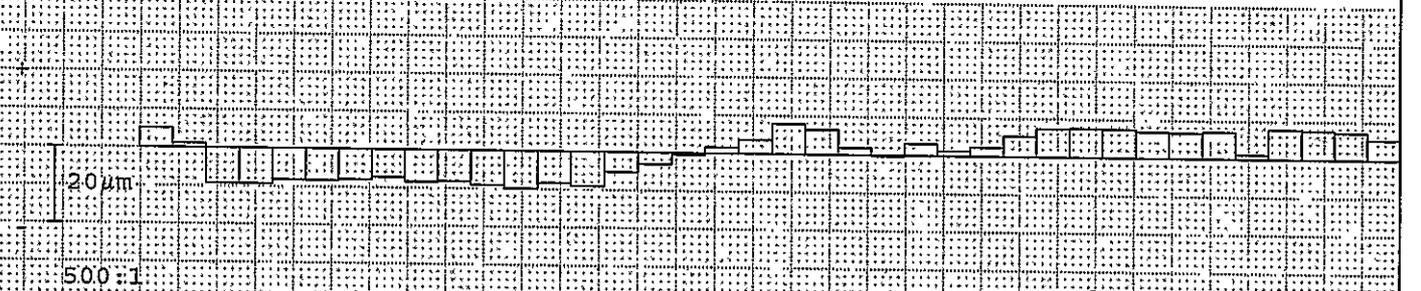


Errore somma di divisione Fp fianco destro



| | | fianco sinistro | | | | fianco destro | | | |
|----------------------------|--------|-----------------|-------|----------|-------|---------------|-------|----------|-------|
| | | Val. misur | Qual. | Val. amm | Qual. | Val. misur | Qual. | Val. amm | Qual. |
| Gr. err. singoli divisione | fp max | 5.8 | | 17.0 | | 9.7 | | 17.0 | |
| Gr. salto di passo | fu max | 9.0 | | | | 12.0 | | | |
| Scarto di divisione | Fp | 9.8 | | | | 16.8 | | | |
| Err. globale di divisione | Fp-e | 8.9 | | 40.0 | | 18.9 | | 40.0 | |
| Err. cordale di divisione | Fpz/8 | 8.9 | | | | 16.1 | | | |

Centricità Fr (Ø-sfera =2mm) ⊙ : 16µm

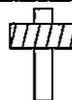


| | | Mdk 42.032 [mm] / Sfere-Ø 2 | |
|------------------------|----|-----------------------------|----------------------|
| Err. di concentricità | Fr | 17.8 | 50.0 |
| Variaz. spessore dente | Rs | | |
| | | Val. amm | 42.132 42.083 |
| | | Val | 42.086 42.108 42.086 |

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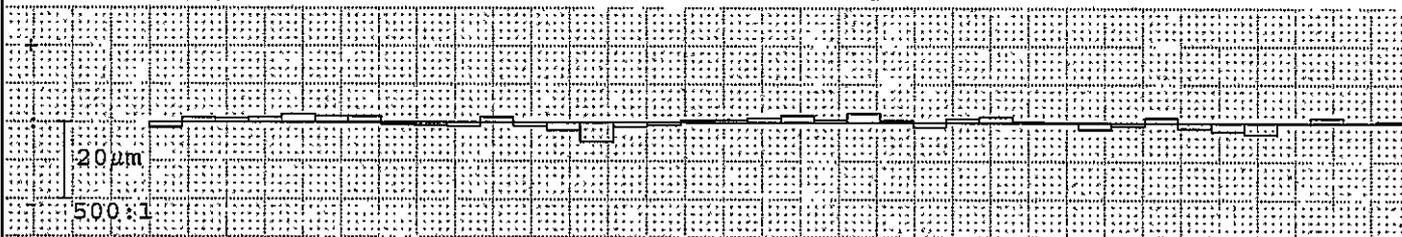
Ruota cilindrica Divisione



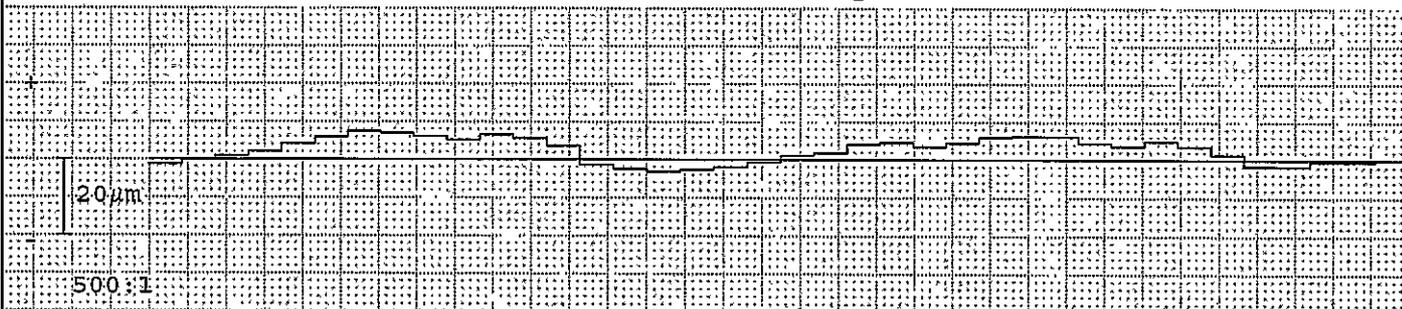
| | | | |
|--------------------------------------|--------------------------------------|----------------------------|------------------------|
| Nr. prog.: STI0412 06 0 | P26 601265 | Controllore: turno C | Data: 11.10.2017 13:00 |
| Denominazione: Output Shaft 1 | Numero denti z 38 | Angolo pressione 30°00'00" | |
| Numero disegno.: D51.6.1076.RIIIIa H | Modulo m 1mm | Angolo elica 00°00'00" | |
| Commessa/serie nr.: pz n.2 | Untersuchungszweck: Laufende Messung | | |
| Masch.Nr.: M001 | Spindel: FORM 64 | Erzdg: | Charge: |



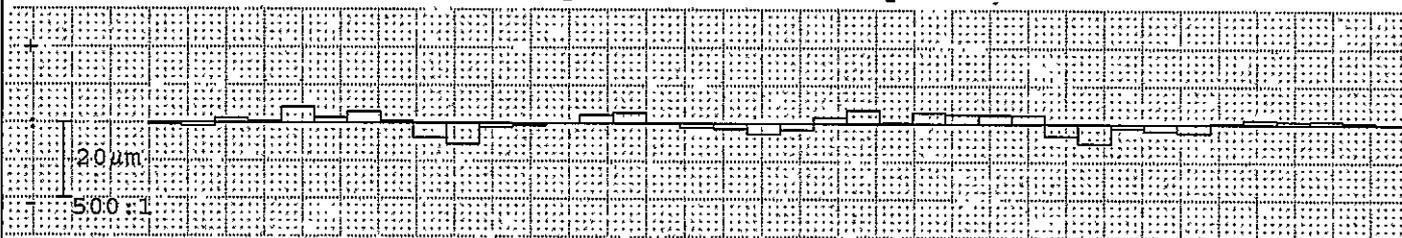
Errori singoli di divisione fp fianco sinistro



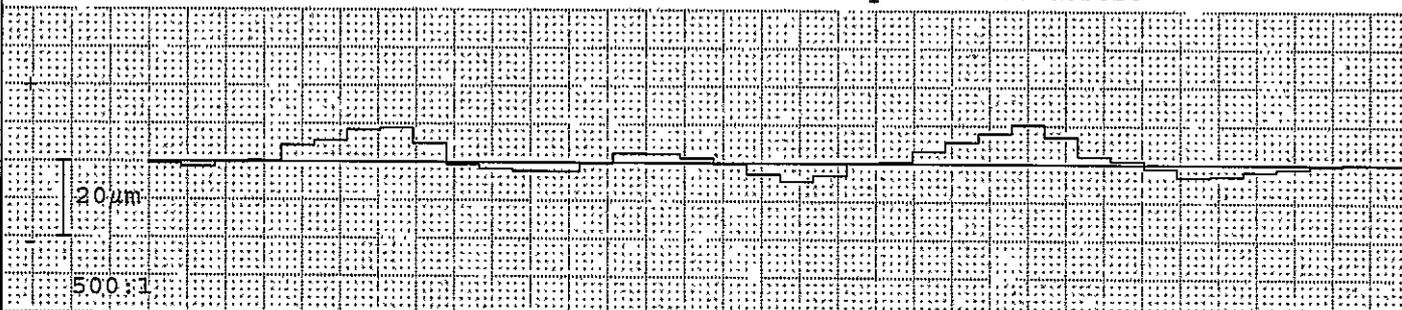
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro



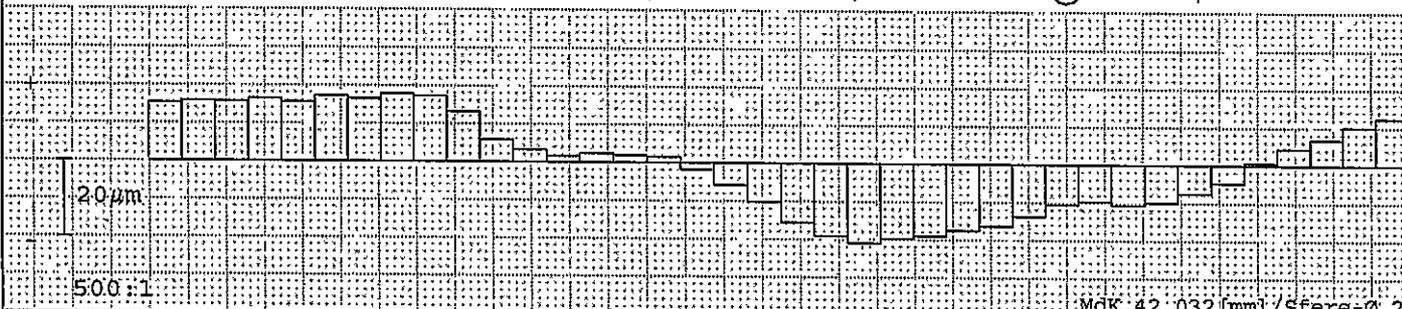
Errore somma di divisione Fp fianco destro



| | fianco sinistro | | | | fianco destro | | | |
|-----------------------------------|-----------------|-------|----------|-------|---------------|-------|----------|-------|
| | Val. misur | Qual. | Val. amm | Qual. | Val. misur | Qual. | Val. amm | Qual. |
| Gr. err. singoli divisione fp max | 5.0 | | 17.0 | | 5.5 | | 17.0 | |
| Gr. salto di passo fu max | 3.8 | | | | 5.4 | | | |
| Scarto di divisione Rp | 7.3 | | | | 9.6 | | | |
| Err. globale di divisione Fp-e | 10.6 | | 40.0 | | 15.0 | | 40.0 | |
| Err. cordale di divisione Fpz/8 | 9.8 | | | | 13.5 | | | |

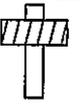
Centricità Fr (Ø-sfera =2mm)

⊙ : 35.4µm

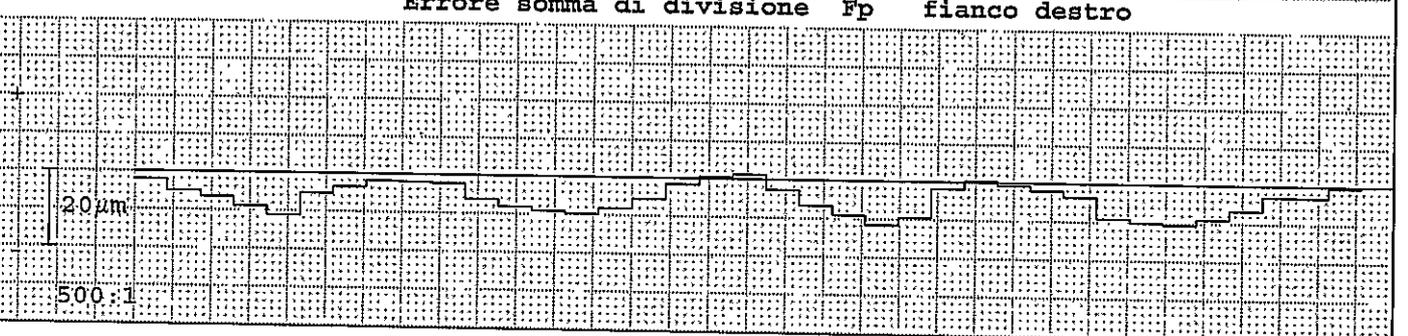
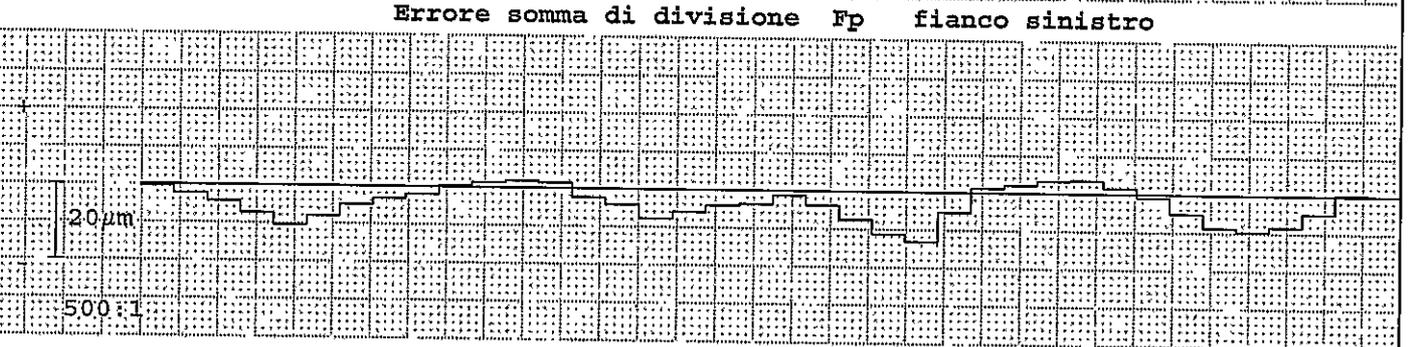
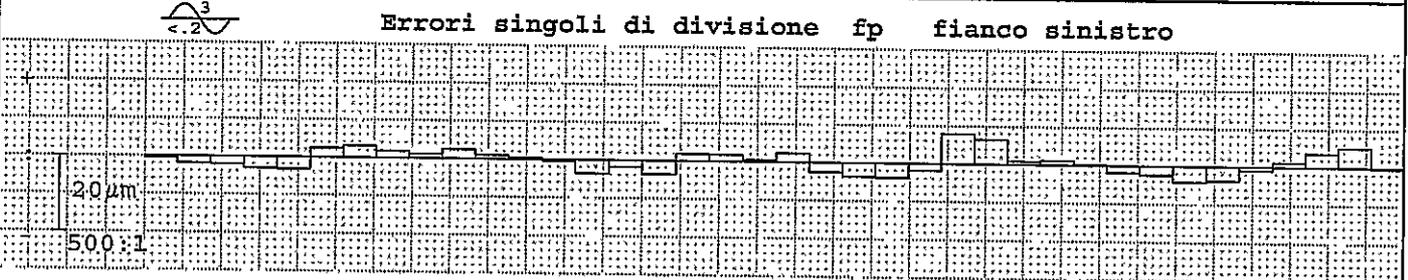


| | | MdK 42.032 [mm] / Sfere-Ø.2 | |
|---------------------------|------|-----------------------------|--------------------------|
| | | Val. amm | Qual. |
| Err. di concentricità Fr | 38.9 | 50.0 | 42.132 42.083 |
| Variac. spessore dente Rs | | | Val. 42.09 42.097 42.092 |

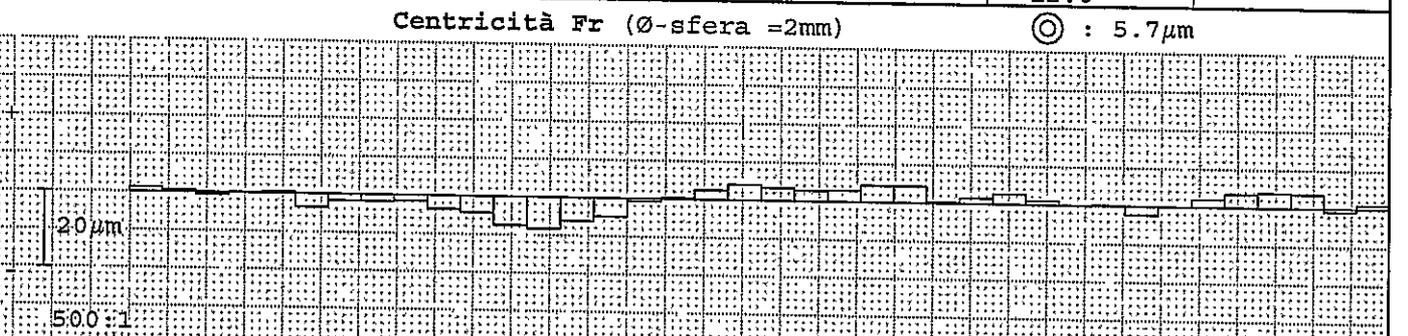
Ruota cilindrica Divisione



| | | | |
|------------------------------------|--------------------|--------------------------------------|----------------------------------|
| Nr. prog.: STI0412 06 0 | P26 601265 | Controllore: turno C | Data: 11.10.2017 13:03 |
| Denominazione: Output Shaft 1 | Numero denti z: 38 | Angolo pressione: 30°00'00" | Angolo elica: 00°00'00" |
| Numero disegno: D51.6.1076.RIIIa H | Modulo m: 1mm | Untersuchungszweck: Laufende Messung | |
| Comessa/serie nr.: pz n.3 | Masch.Nr.: M001 | | Spindel: Formelwerkzeug: Charge: |



| | | | | | | | | | |
|---|--------|-----------------|-------|----------|-------|---------------|-------|----------|-------|
| Corso per misura divis.: 38.928 z=7.2mm | | fianco sinistro | | | | fianco destro | | | |
| | | Val. misur | Qual. | Val. amm | Qual. | Val. misur | Qual. | Val. amm | Qual. |
| Gr. err. singoli divisione | fp max | 7.9 | | 17.0 | | 7.8 | | 17.0 | |
| Gr. salto di passo | fu max | 9.7 | | | | 8.3 | | | |
| Scarto di divisione | Rp | 12.1 | | | | 13.4 | | | |
| Err. globale di divisione | Fp-e | 16.6 | | 40.0 | | 12.7 | | 40.0 | |
| Err. cordale di divisione | Fpz/B | 16.6 | | | | 12.0 | | | |

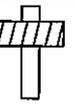


| | | | | | | |
|------------------------|----|------|------|----------|--------|--------|
| Err. di concentricità | Fr | 12.6 | 50.0 | Val. amm | 42.132 | 42.083 |
| Variaz. spessore dente | Rs | | | Val. amm | 42.083 | 42.083 |

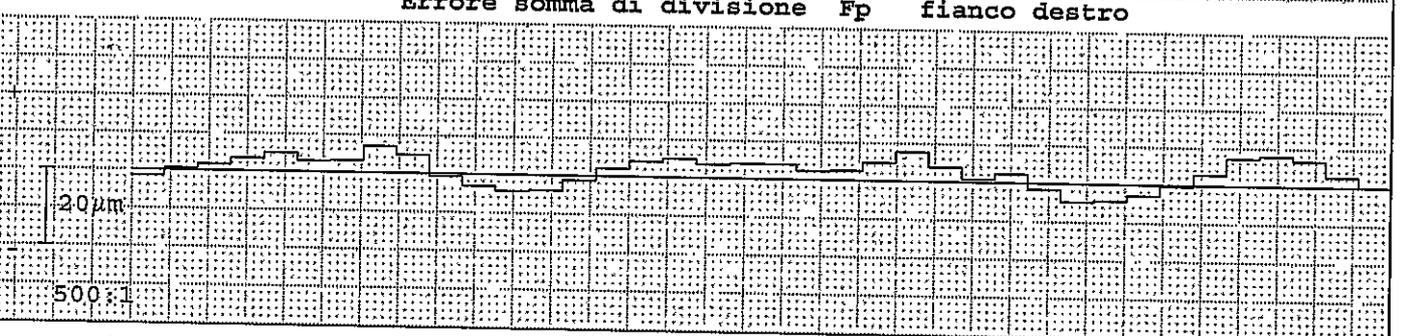
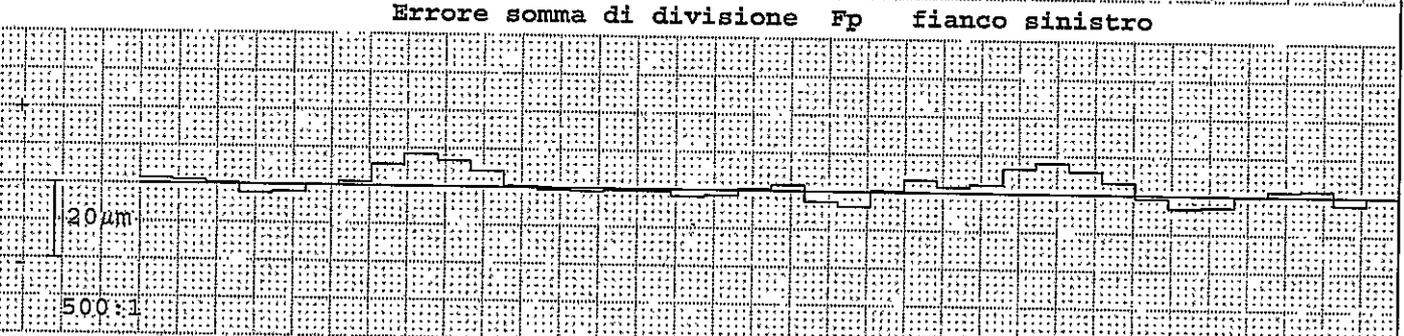
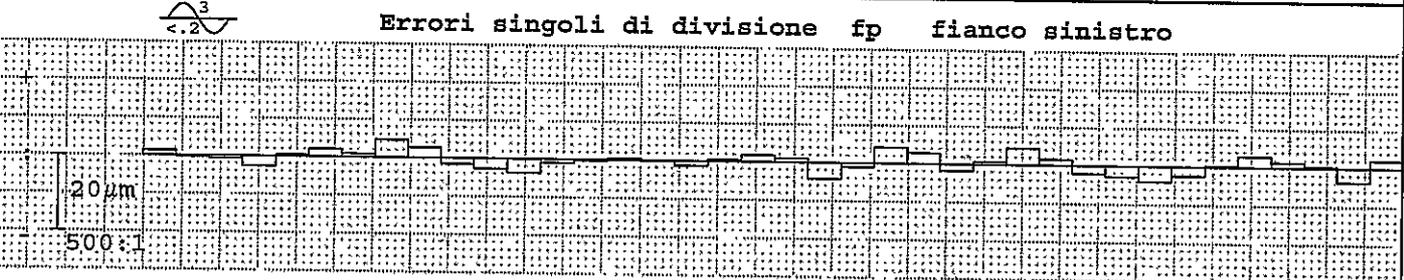


Docum. archiviato elettronicamente. Archiviazione cartacea non necessaria

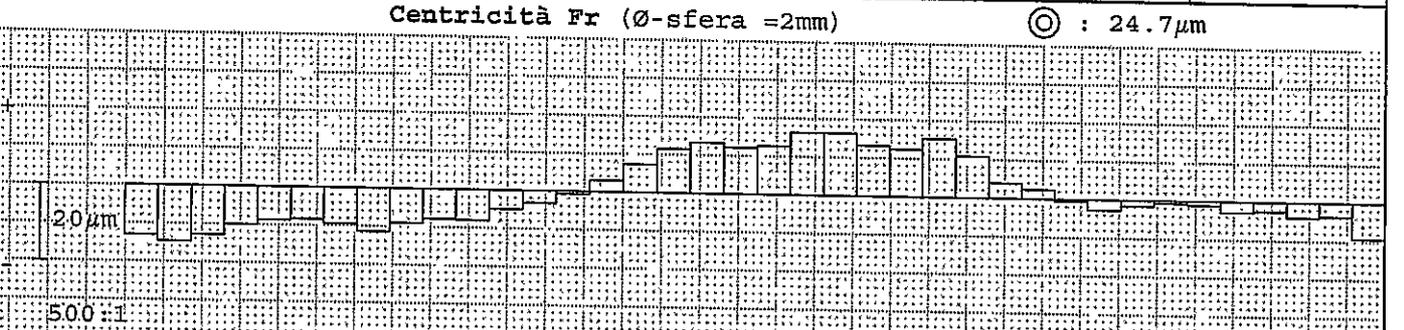
Ruota cilindrica Divisione



| | | | |
|-------------------------------------|--------------------|--------------------------------------|-------------------------|
| Nr. prog.: STI0412 06 0 | P26 601265 | Controllore: turno C | Data: 11.10.2017 13:11 |
| Denominazione: Output Shaft.1 | Numero denti z: 38 | Angolo pressione: 30°00'00" | Angolo elica: 00°00'00" |
| Numero disegno: D51.6.1076.RIIIIa H | Modulo m: 1mm | Untersuchungszweck: Laufende Messung | |
| Comessa/serie nr.: pz n.4 | Masch.Nr.: M001 | | Spindel: FORM 64 |
| Masch.Nr.: | | Spindel: FORM 64 | |
| Masch.Nr.: | | Spindel: FORM 64 | |



| | | fianco sinistro | | | | fianco destro | | | |
|----------------------------|----------------|-----------------|-------|----------|-------|---------------|-------|----------|-------|
| | | Val. misur | Qual. | Val. amm | Qual. | Val. misur | Qual. | Val. amm | Qual. |
| Corso per misura divis.: | 38.928 z=7.2mm | | | | | | | | |
| Gr. err. singoli divisione | fp max | 4.7 | | 17.0 | | 5.5 | | 17.0 | |
| Gr. salto di passo | fu max | 5.7 | | | | 6.9 | | | |
| Scarto di divisione | Rp | 8.9 | | | | 9.9 | | | |
| Err. globale di divisione | Fp-e | 12.2 | | 40.0 | | 12.6 | | 40.0 | |
| Err. cordale di divisione | Fpz/8 | 11.0 | | | | 12.4 | | | |



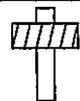
| | | | | | | |
|------------------------|----|------|------|----------|--------|--------|
| Err. di concentricità | Fr | 30.9 | 50.0 | Val. amm | 42.132 | 42.083 |
| Variaz. spessore dente | Rb | | | Val. | 42.107 | 42.115 |

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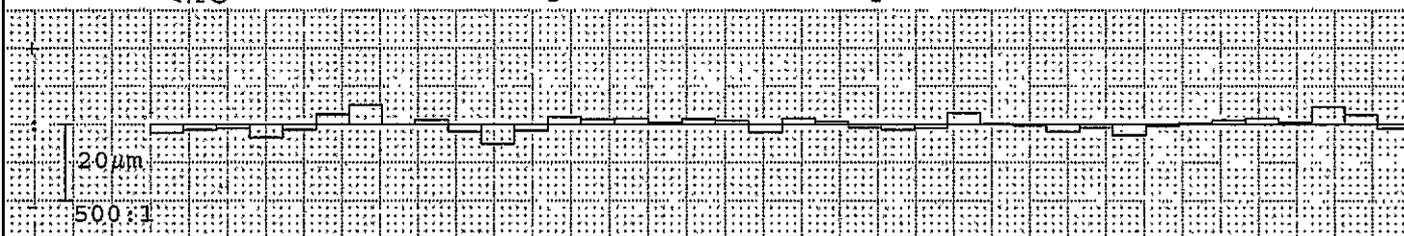
Ruota cilindrica Divisione



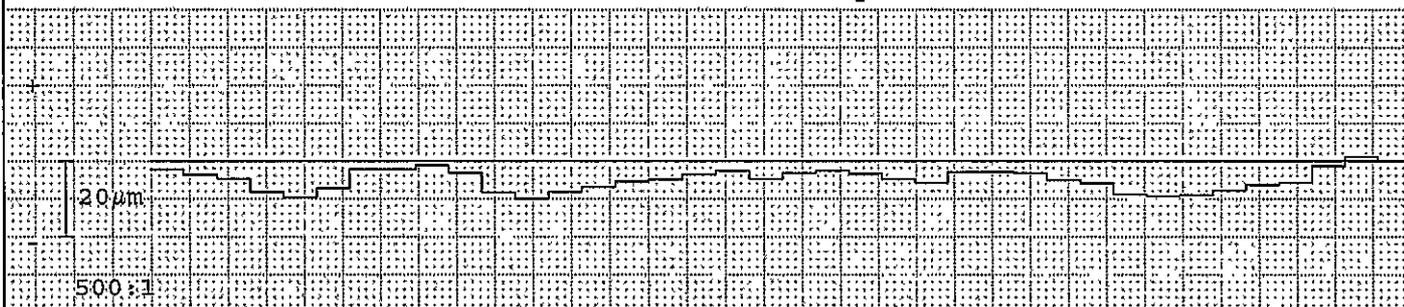
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|--------------------------------------|------------------------|--------------------------------------|-------------------------|
| Nr. prog.: STI0412 06 0 | P26 601265 | Controllore: turno C | Data: 11.10.2017 13:19 |
| Denominazione: Output Shaft 1 | Numero denti z: 38 | Angolo pressione: 30°00'00" | Angolo elica: 00°00'00" |
| Numero disegno.: D51.6.1076.RIIIIa H | Modulo m: 1mm | Untersuchungszweck: Laufende Messung | |
| Comessa/serie nr.: pz n.5 | Spindel: Formelatzelg: | Charge: | |
| Masch.Nr.: M001 | | | |



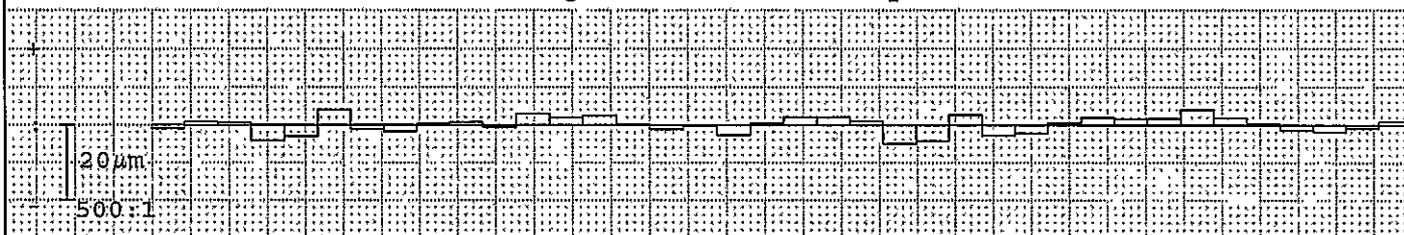
Errori singoli di divisione fp fianco sinistro



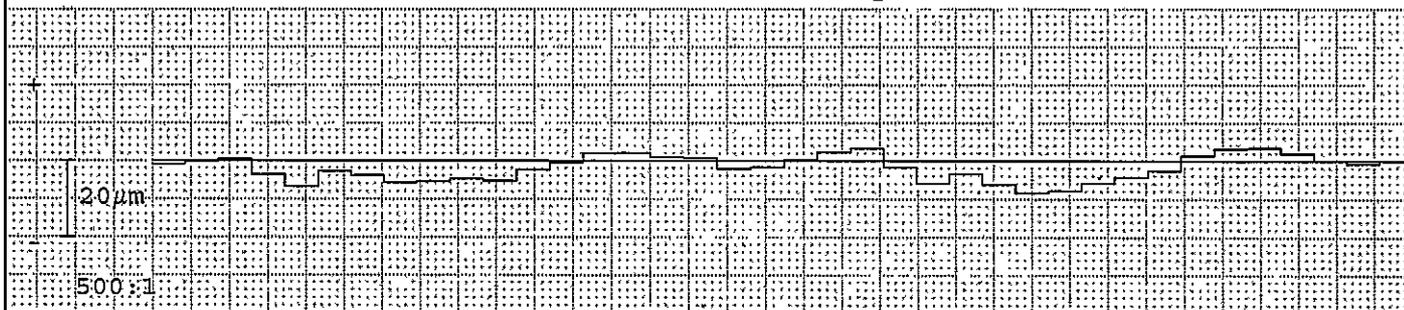
Errore somma di divisione Fp fianco sinistro



Errori singoli di divisione fp fianco destro

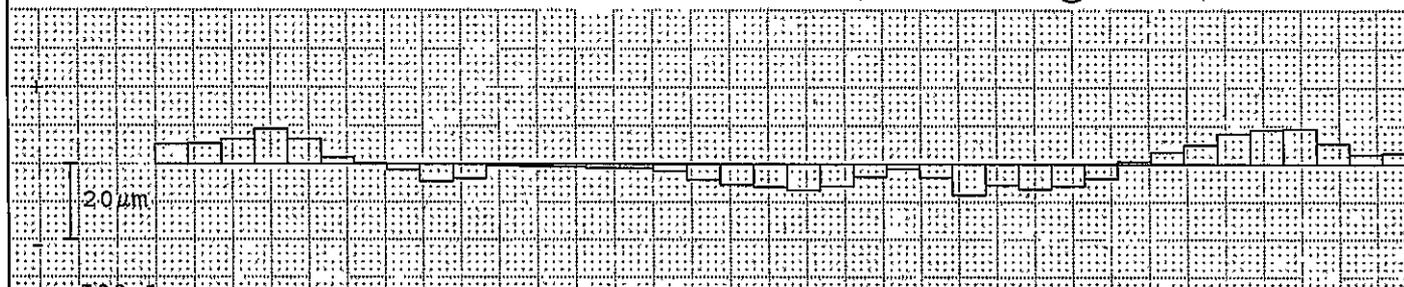


Errore somma di divisione Fp fianco destro



| | Corsa per misura divis.: 38.928 z=7.2mm | fianco sinistro | | fianco destro | |
|-----------------------------------|---|-----------------|-------|---------------|-------|
| | | Val. misur | Qual. | Val. amm | Qual. |
| Gr. err. singoli divisione fp max | | 5.2 | | 17.0 | |
| Gr. salto di passo fu max | | 5.0 | | 7.1 | |
| Scarto di divisione Rp | | 10.2 | | 9.0 | |
| Err. globale di divisione Fp-e | | 11.1 | 40.0 | 11.7 | 40.0 |
| Err. cordale di divisione Fpz/8 | | 10.1 | | 11.7 | |

Centricità Fr (Ø-sfera =2mm) ⊙ : 11.6 μm



Mdk: 42.032 [mm] / Sfere-Ø: 2

| | | | |
|---------------------------|------|------|---------------------------|
| Err. di concentricità Fr | 17.4 | 50.0 | Val. amm 42.132 42.083 |
| Variab. spessore dente Rs | | | Val. 42.094 42.102 42.084 |

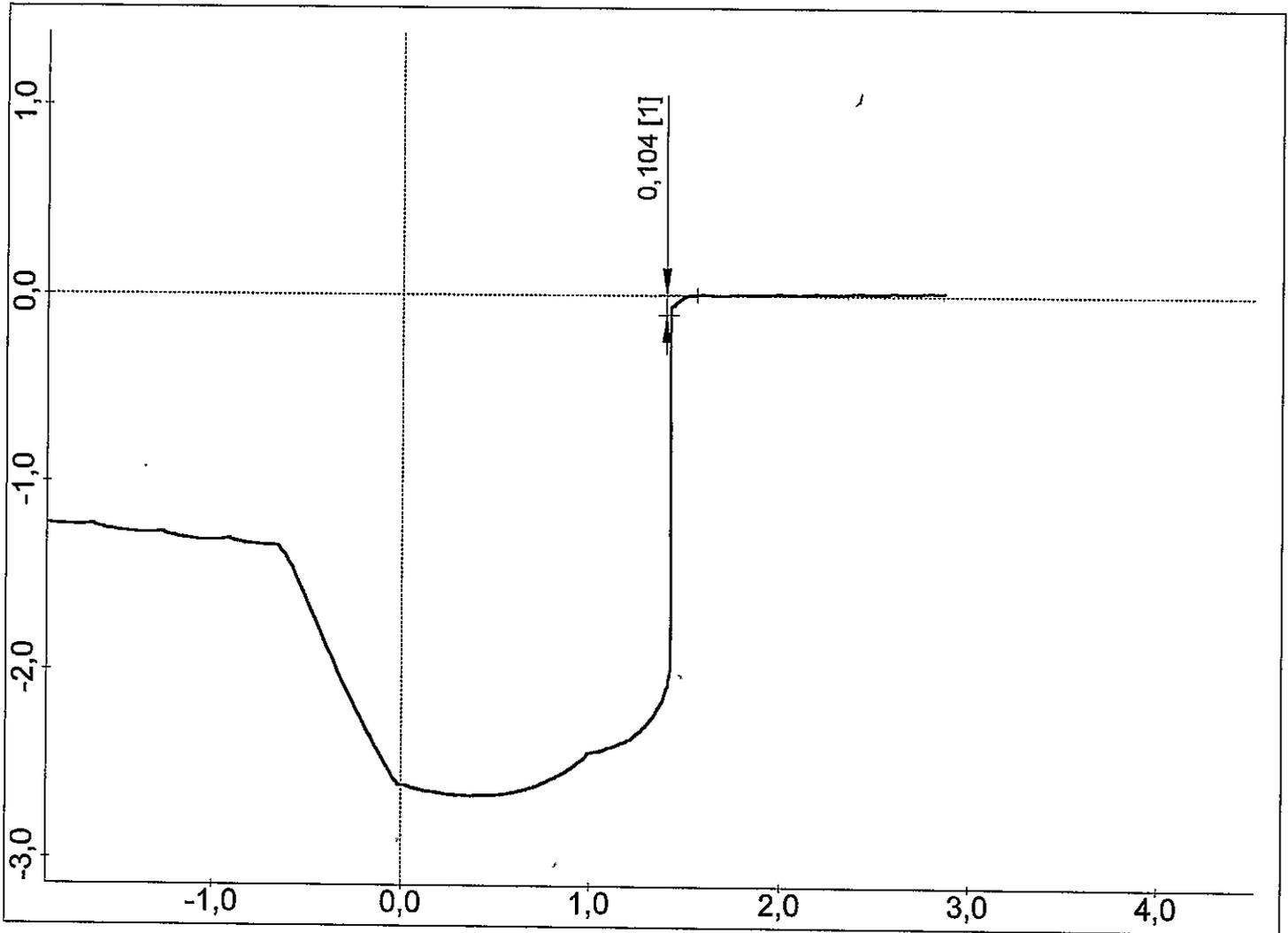




Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N.1
Operatore: TURNO A
Data, ora: 11.10.2017, 09:56
Nota: PART X (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

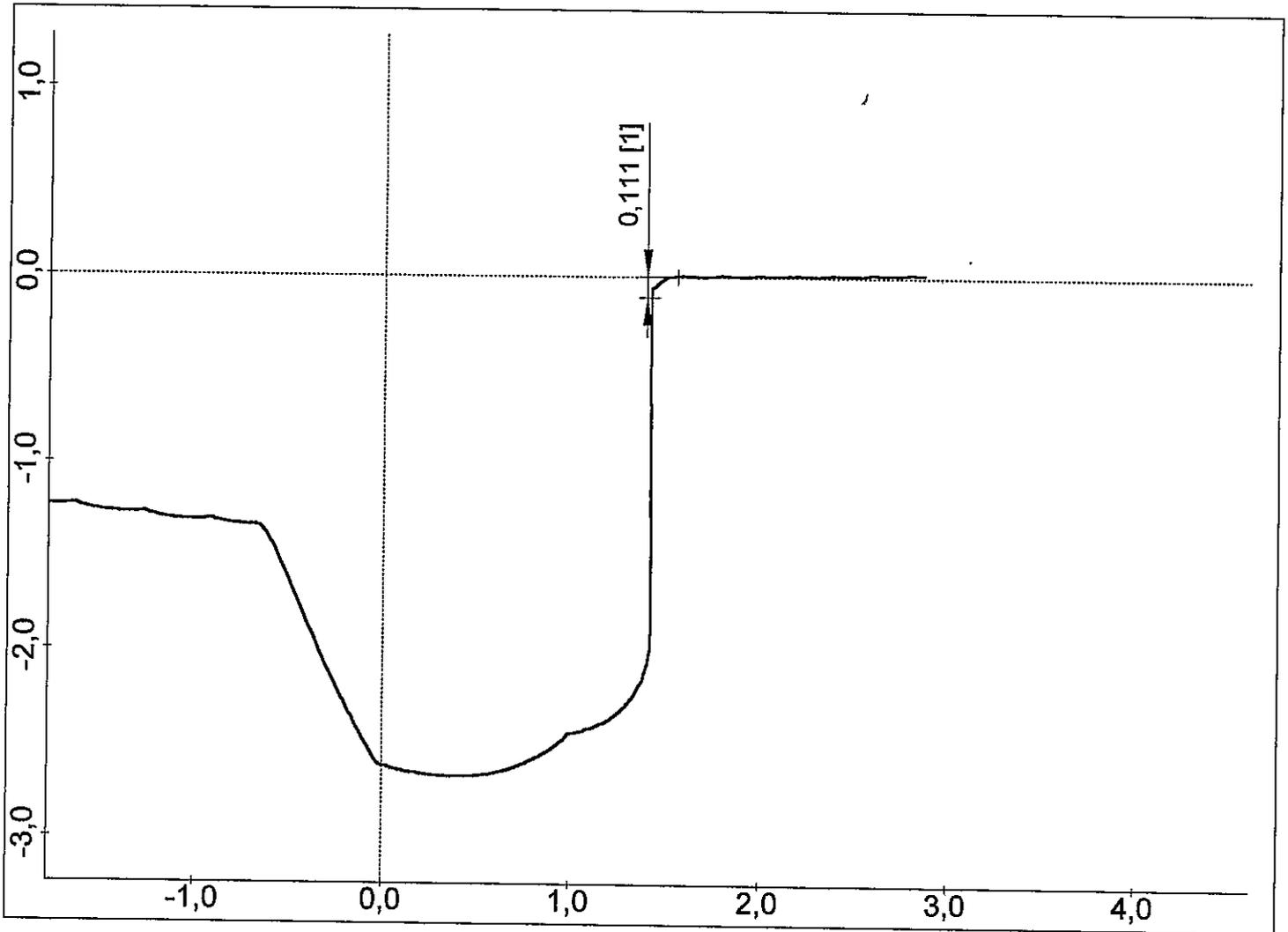
N°BADGE ODP RICEVENTE

GETRAG

Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N.2
Operatore: TURNO A
Data, ora: 11.10.2017, 09:56
Nota: PART X (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

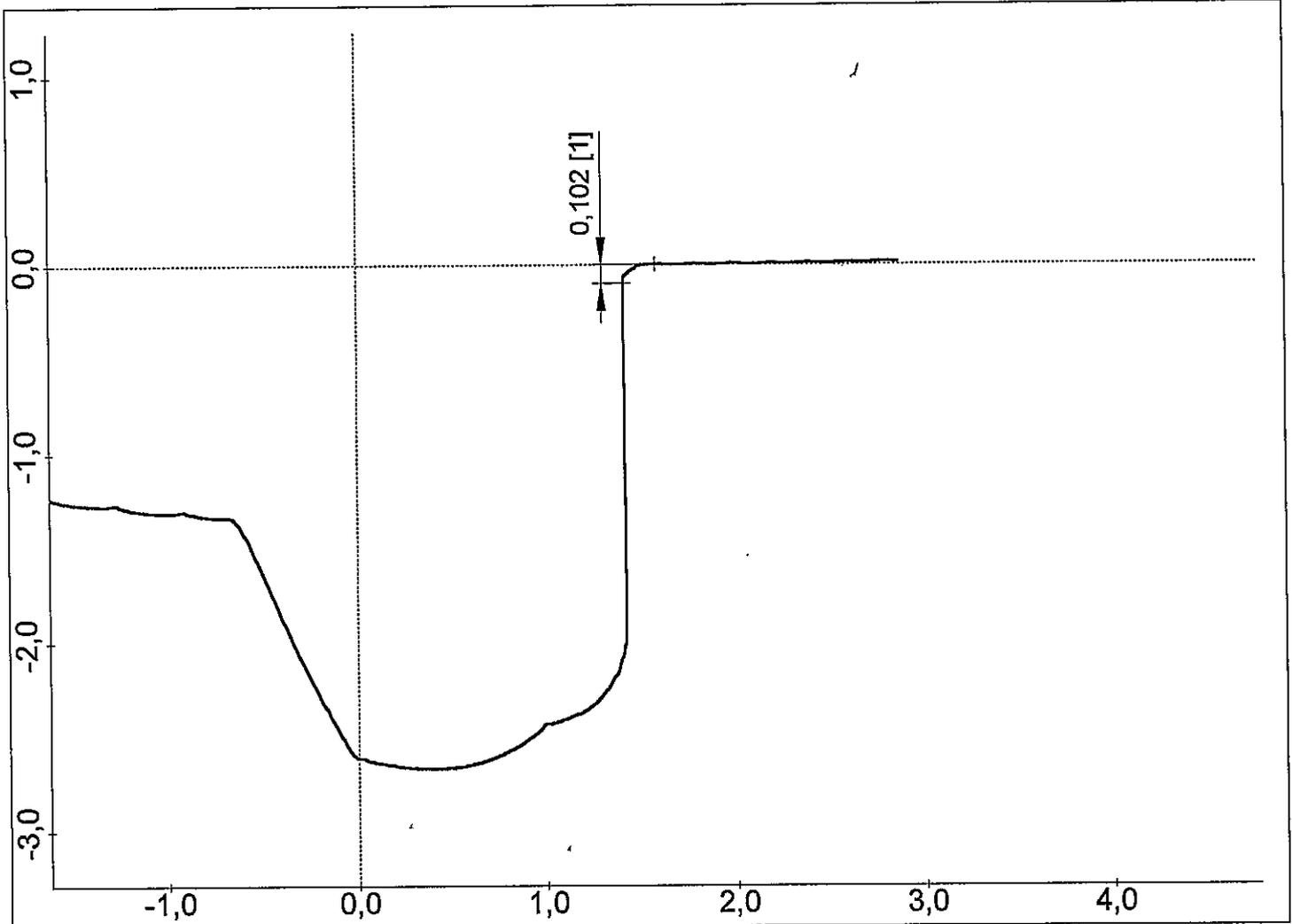
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Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N.3
Operatore: TURNO A
Data, ora: 11.10.2017, 09:56
Nota: PART X (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

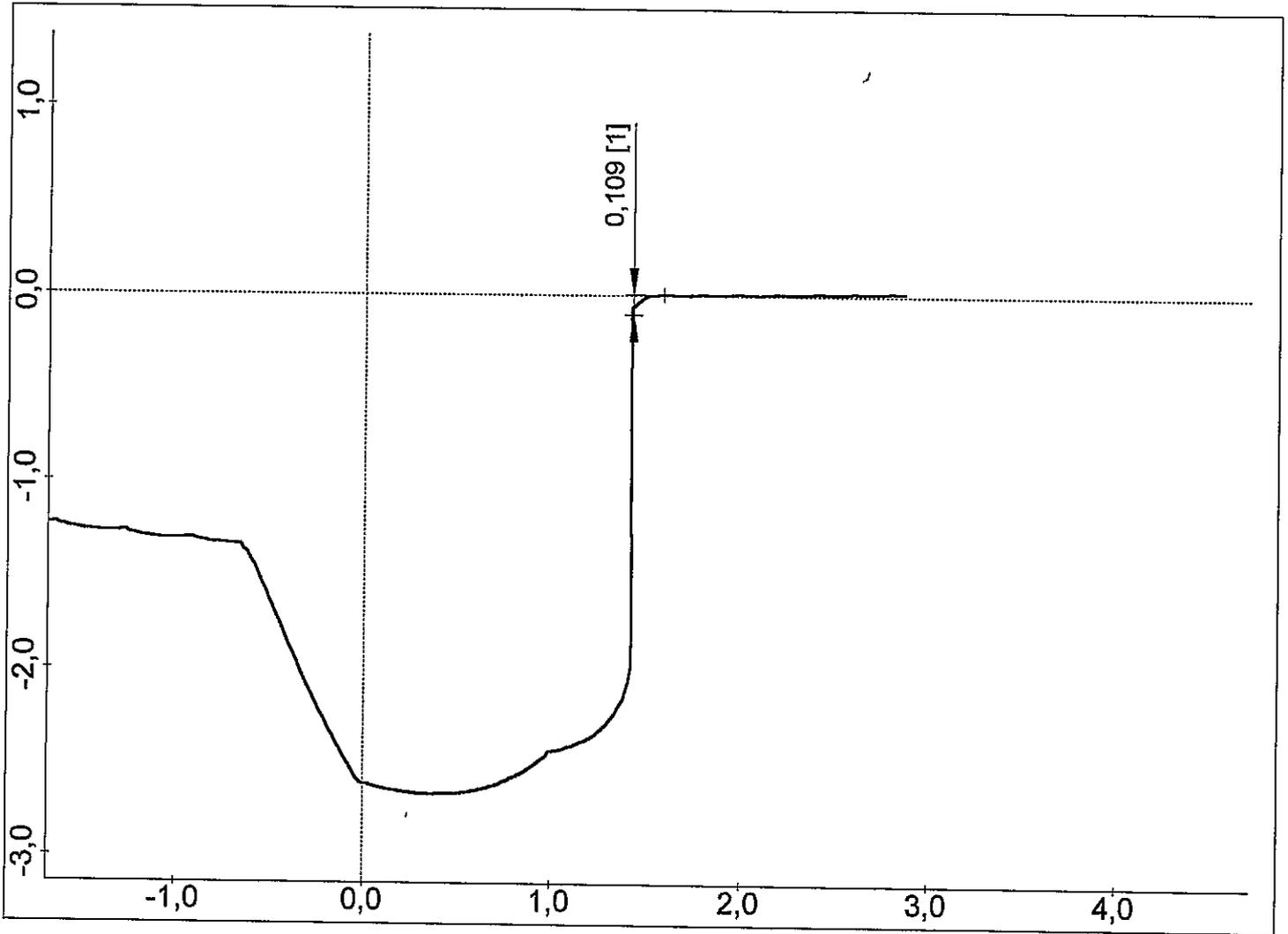
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Valutazione Profilo

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N°BADGE ODP RICEVENTE



PERTHOMETER CONCEPT

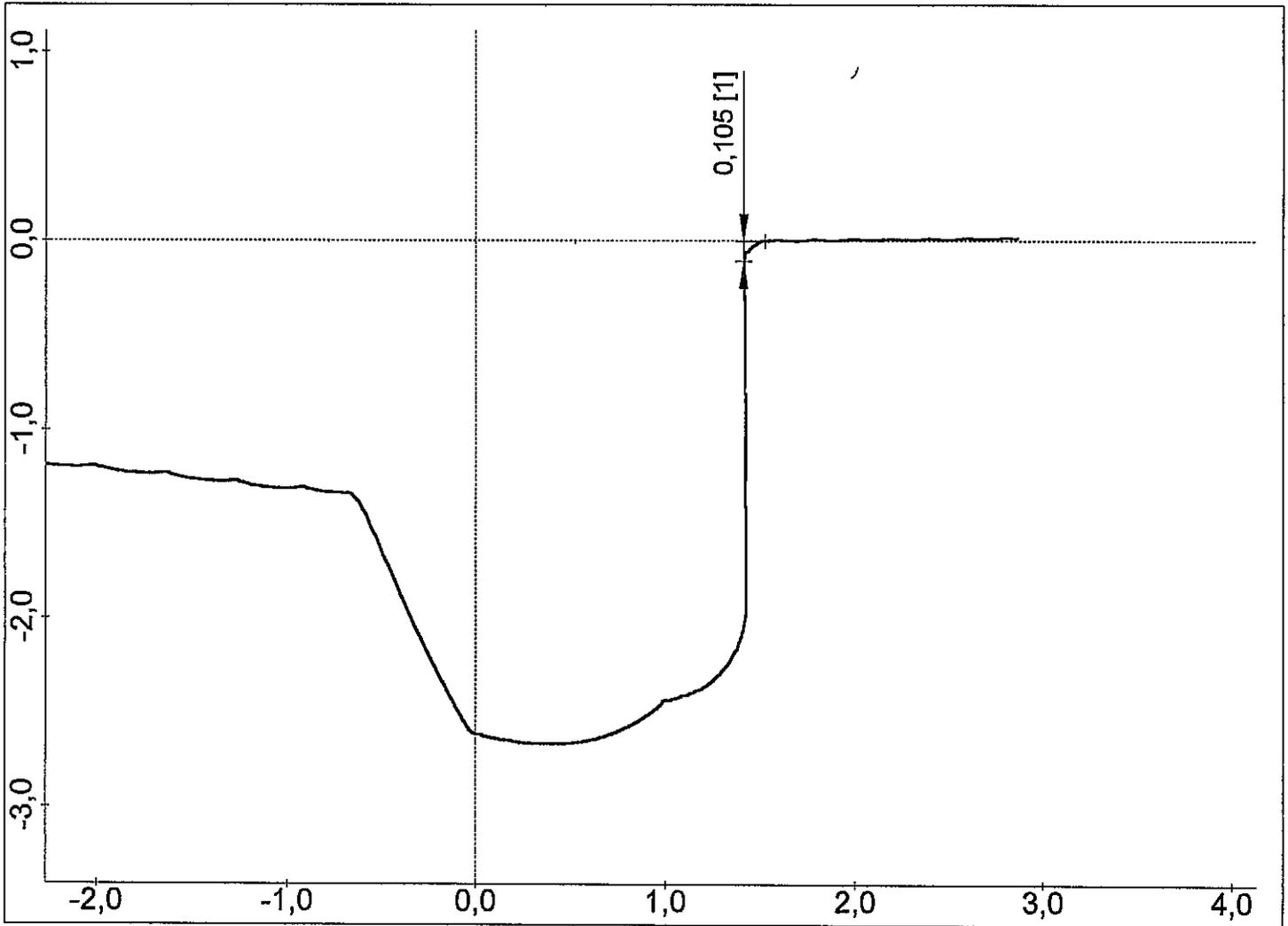
Area Riservata alla Produzione

Valutazione Profilo

OK

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N°BADGE ODP RICEVENTE



PERTHOMETER CONCEPT

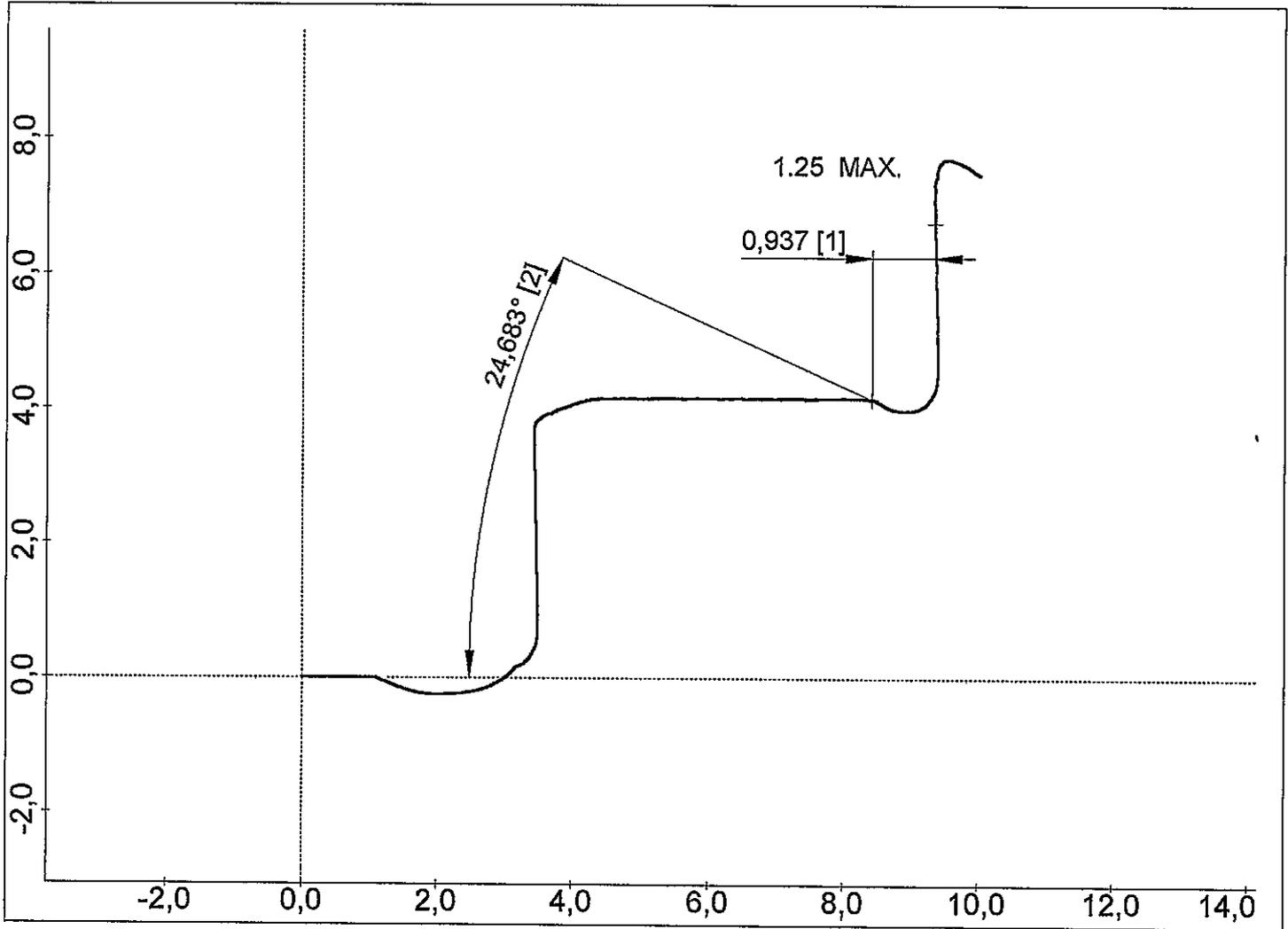
Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

N°BADGE ODP RICEVENTE



PERTHOMETER CONCEPT

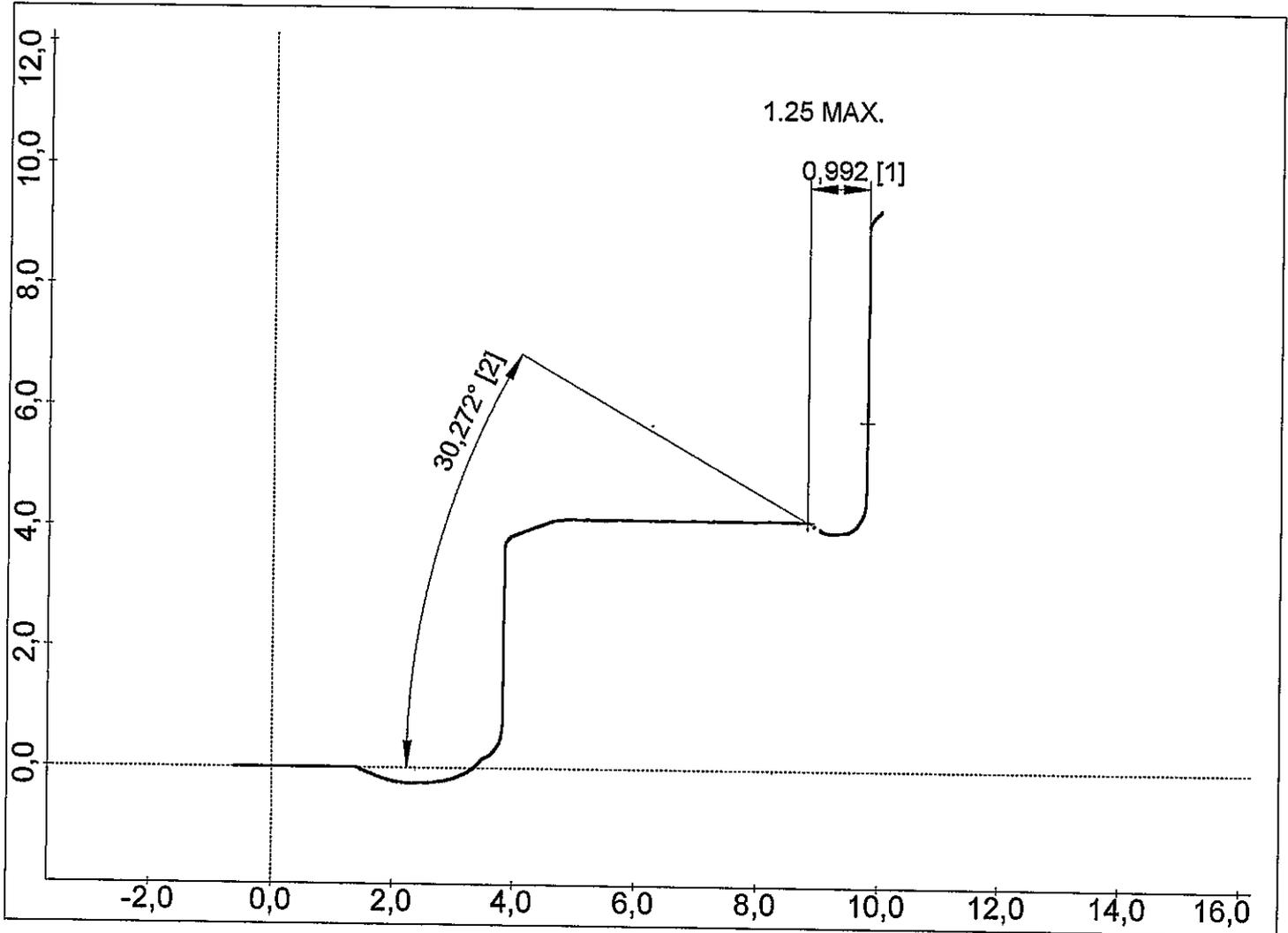
Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

N°BADGE ODP RICEVENTE



PERTHOMETER CONCEPT

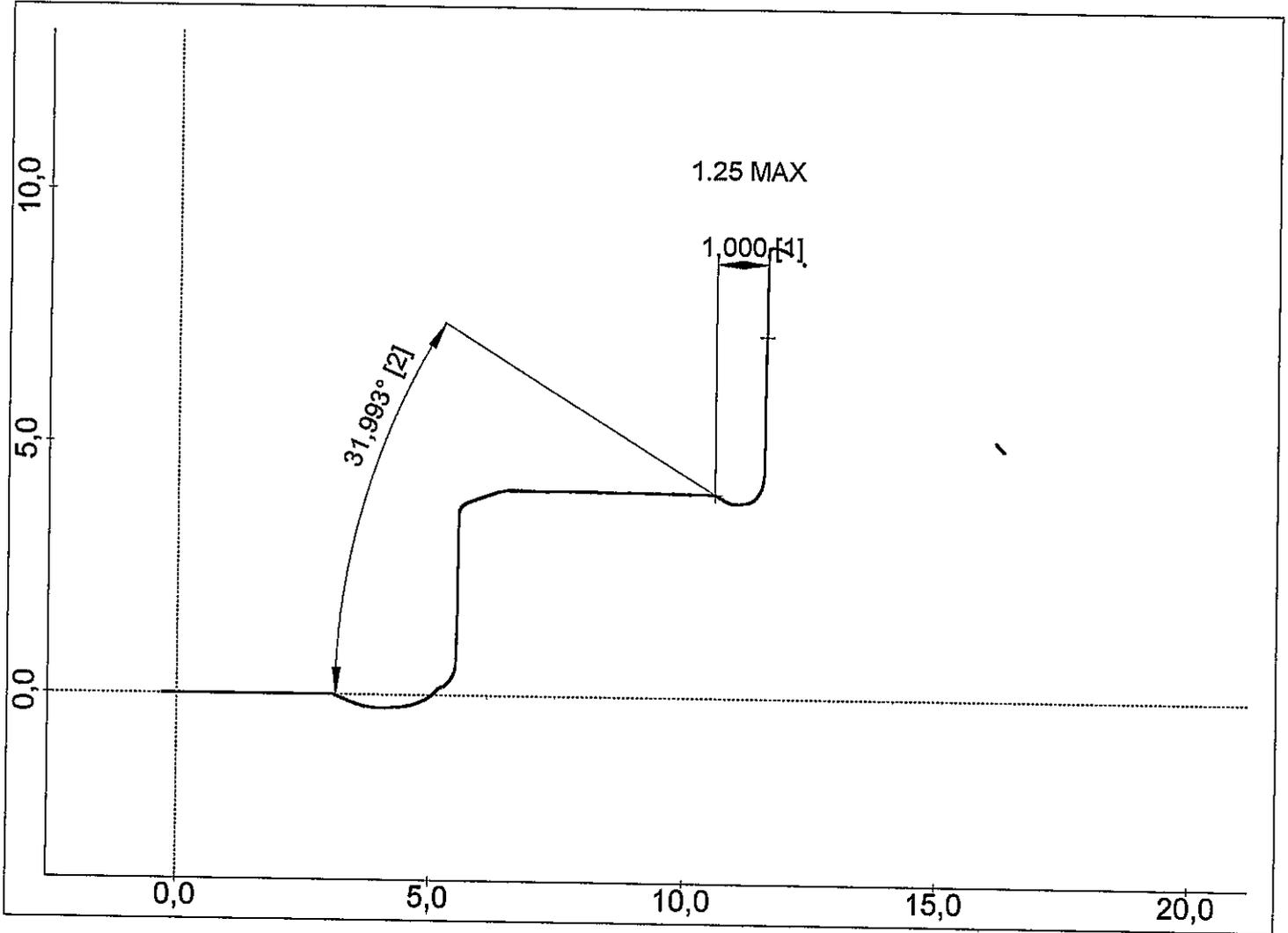
Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

N°BADGE ODP RICEVENTE



PERTHOMETER CONCEPT

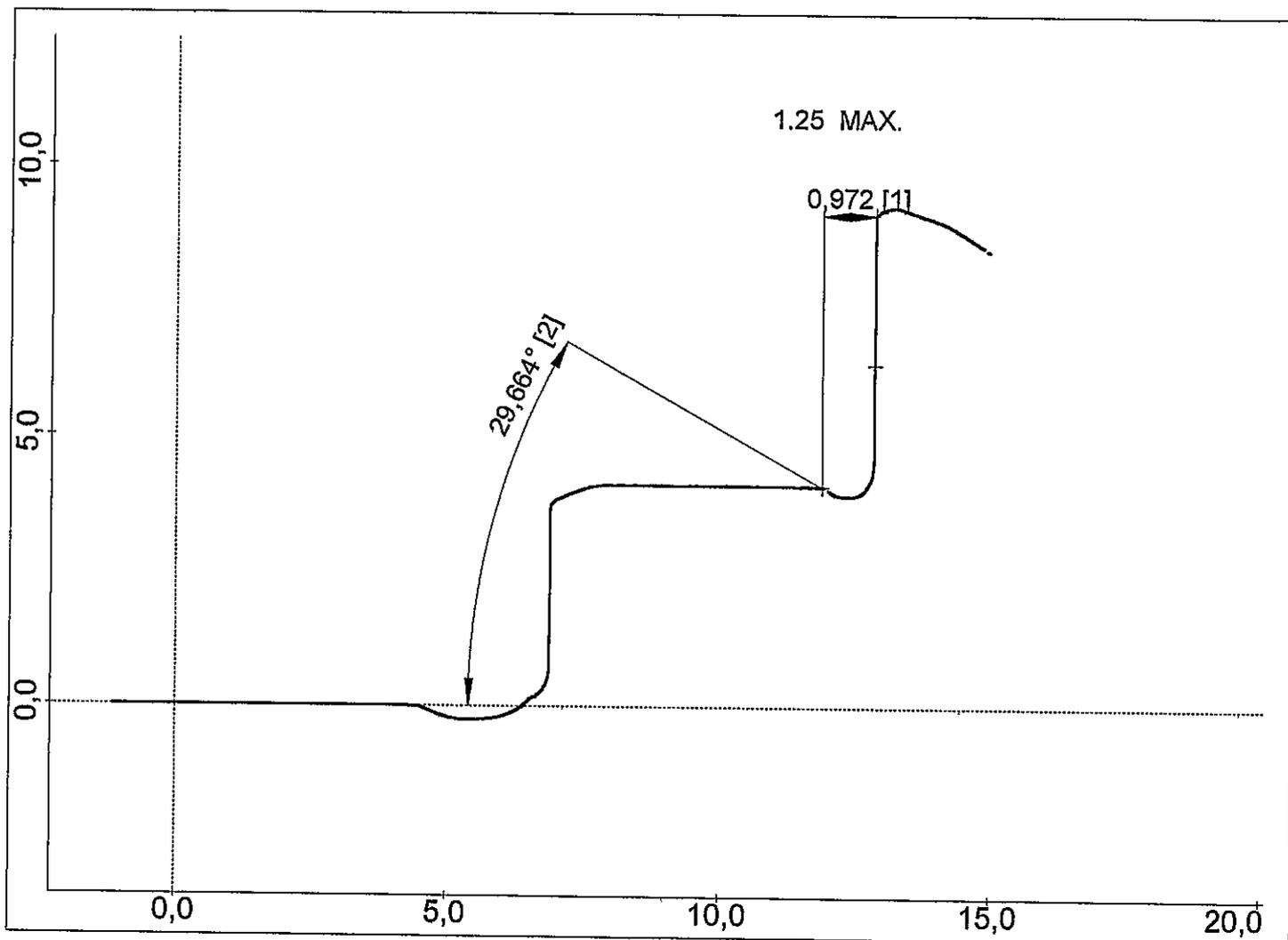
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|--------------------------------|--------------------------|
| Area Riservata alla Produzione | |
| Valutazione Profilo | |
| OK | <input type="checkbox"/> |
| NOK | <input type="checkbox"/> |
| N°BADGE ODP RICEVENTE | |
| <input type="text"/> | |



Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N.4
Operatore: TURNO A
Data, ora: 11.10.2017, 09:36
Nota: PART Y (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

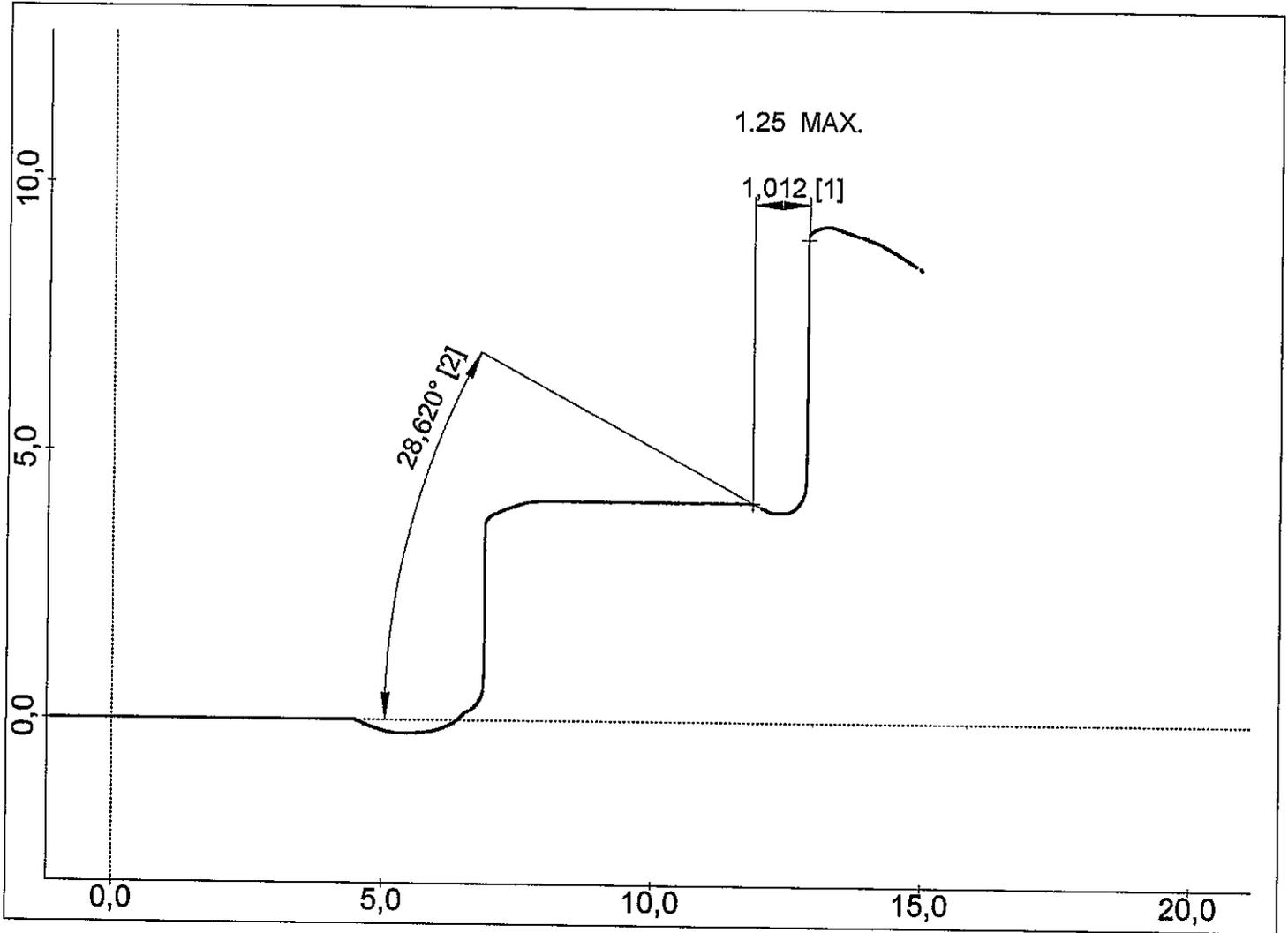
N°BADGE ODP RICEVENTE



Via dei Ciclamini 4, Modugno (BA)

Oggetto: OS 1
Numero: 1076 PZ N.5
Operatore: TURNO A
Data, ora: 11.10.2017, 09:36
Nota: PART Y (PPAP)
Tastatore: PCV 350 / 33 mm

Macchina: MOA 416120 002



PERTHOMETER CONCEPT

Area Riservata alla Produzione

Valutazione Profilo

OK

NOK

N°BADGE ODP RICEVENTE

