
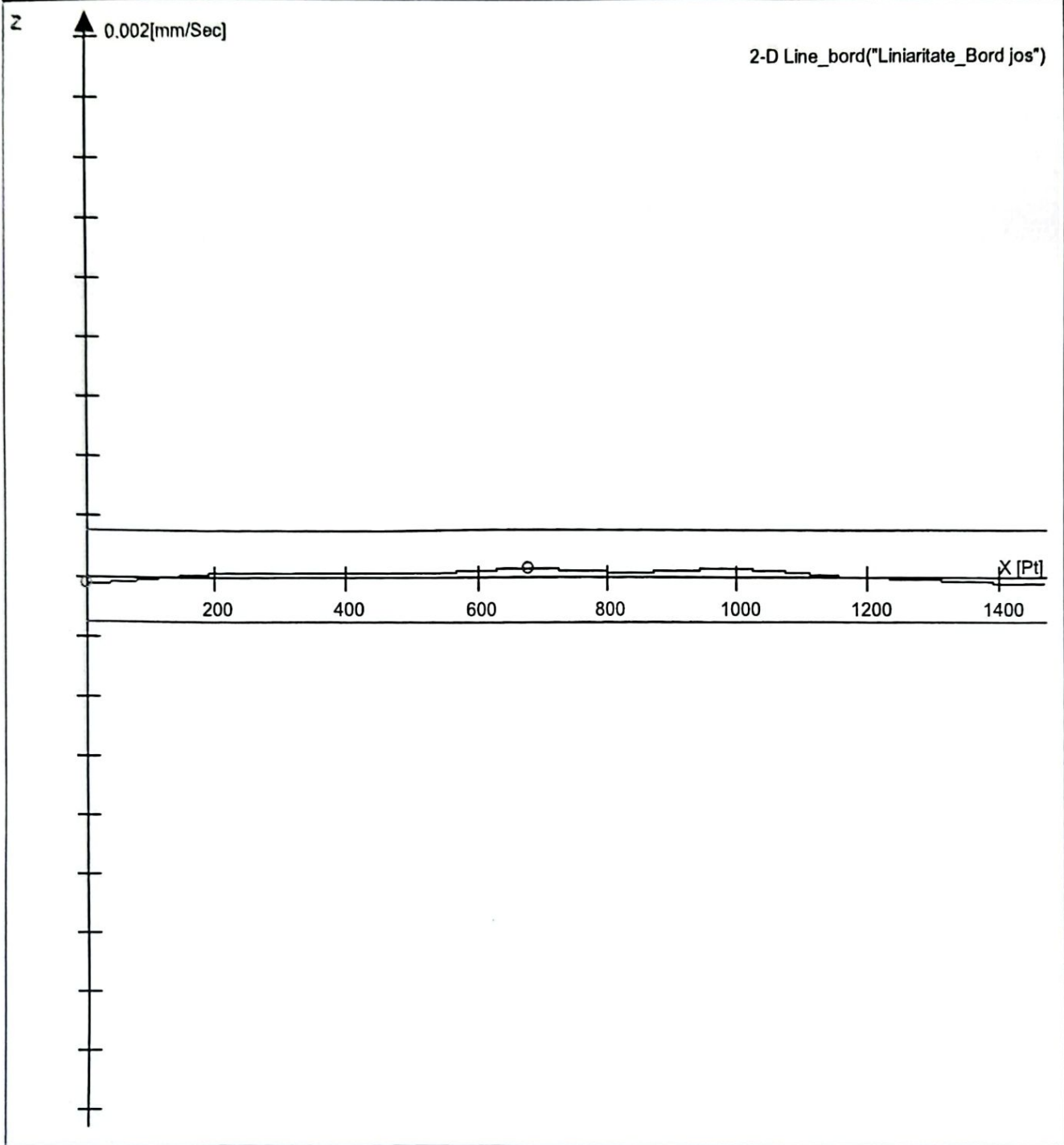

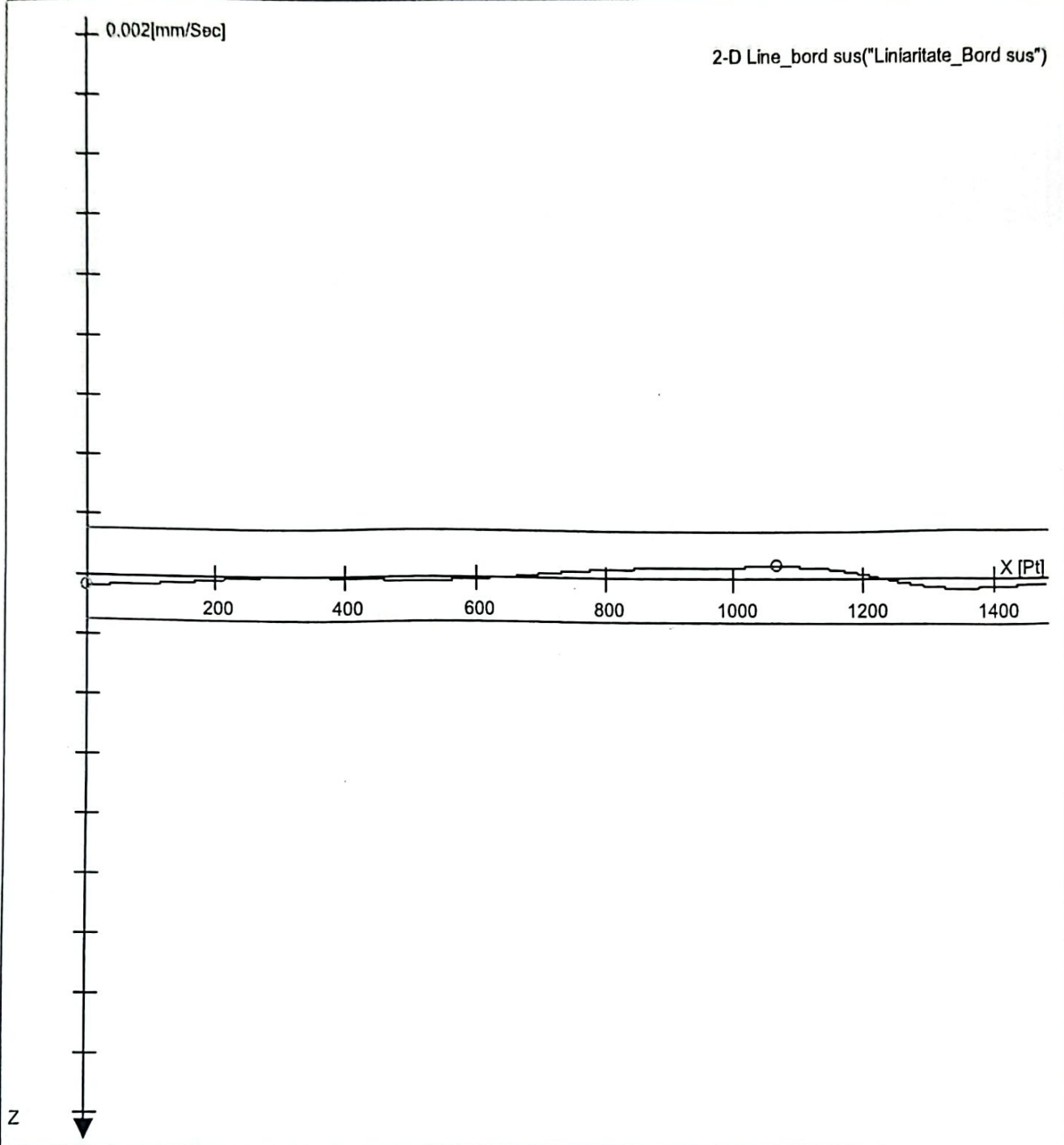


| | | | | | |
|----------------------------------------------------------------------------------|--------------------|---------------------|-------------------|---------------------------------------|--------------------------------|
|  | | Calypso 6.6.2801 | Carl Zeiss | Date July 18, 2024 | Order 42214 SN 020//2971847 |
| Part Number EDS SL182984-TB-0012-SV DMM | CMM Type SV DMM | Drawing No. | | Department: Operator Signature: | Vasilica Daniel |
| Measurement Plan Param_Zyrota_JR_SL_2020 | | | | Liniaritate_Bord jos | |



| Magnification | | | | | | | | 5000.0 | |
|---------------|----------------------|--------|--------|-----------|-------|-------------|-------|--------|-----|
| No | Identifier | Actual | Tol. | Number of | Speed | Stylus Radi | F.Typ | L-C | UPR |
| 1 | Liniaritate_Bord jos | 0.0005 | 0.0030 | 1467 | | 1.4992 | Gauss | 0.8 | |

| | | | | |
|-----------------------------------------------------------------------------------|---------------------|-------------|--|-------------------------------------------------------|
|  | Calypso 6.6.2801 | Carl Zeiss | | Date July 18, 2024 |
| | | | | Order 42214 SN 020//2971847 |
| Part Number EDS SL182984-TB-0012 | CMM Type SP 1110 | Drawing No. | | Department: Operator Signature: Vasilica Danief |
| Measurement Plan Param_Zyroa_JR_SL_2020 | | | | Liniaritate_Bord sus |



Magnification 5000.0

| No | Identifier | Actual | Tol. | Number of | Speed | Stylus Radi | F.Typ | L-C | UPR |
|----|----------------------|--------|--------|-----------|-------|-------------|-------|-----|-----|
| 1 | Liniaritate_Bord sus | 0.0007 | 0.0030 | 1478 | | 1.4992 | Gauss | 0.8 | |

Masuratoare Finalizata numarul 2024042214

Comanda Productie 2894246

S/N 20-2971847

Status Demaraj Serie

Nr. Piese/ Cda 1

Masina P12-PITTLER 630-1

Reper EDS SL182984-TB-0012-ISB 000

Identificare familie pe baza instructiunii de verificare -- Va rugam selectati --

Tip piesa Inele Zyrola

Piesa prezinta muchii vii Da Nu

Operatia Strunjire dura

Locatia

Info Caracteristici:

Data Sosire 18/07/2024 16:33:18

Operator productie Anghel, Cristian-Florin

Observatii

Data Start Masurare 18/07/2024 17:24:00

Caracteristici de masurare

| Caracteristici de masurare | Decizie |
|----------------------------|---------|
| Liniaritate bord | IO |
| Descarcare bord | IO |
| Unghi bord | IO |

Data Finalizare 18/07/2024 17:33:45



PROTOCOL ZEISS
QM - Măssraum Hala 3

SCHAEFFLER

Measurement Plan
Param_Zyrolo_JR_SL_2020
Temperature workpiece
23.99

Date
July 18, 2024

Time
5:33:31 PM

* Comanda *
42214 SN 020//2971847

* Sap *
2894246//AB




Operator
Vasilica Daniel

CMM EQ 12072033
WMM 076372




* Denumire reper *
EDS SL182984-TB-0012-ISB 000

| Actual | Nominal | Upper Tol. | Lower Tol. | Deviation |
|--------|---------|------------|------------|-----------|
|--------|---------|------------|------------|-----------|

= Bord Sus =

| | | | | | |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------|--------|---------|----------------|
|  | Descarcare_bord sus_Z 0.0286 | 0.0260 | 0.0090 | -0.0090 | -- 0.0026 |
|  | INFO_Unghi_bord sus -0.5464 Unghi calculat indirect in functie de cotele de descarcare ale bordului | -0.4966 | 0.1719 | -0.1719 | -- -0.0499 |
|  | Liniaritate_Bord sus 0.0007 | 0.0000 | 0.0030 | | - 0.0007 |

= Bord Jos =

| | | | | | |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------|--------|---------|-------------|
|  | Descarcare_bord jos_Z 0.0279 | 0.0260 | 0.0090 | -0.0090 | - 0.0019 |
|  | INFO_Unghi_bord jos 0.5332 Unghi calculat indirect in functie de cotele de descarcare ale bordului | 0.4966 | 0.1719 | -0.1719 | - 0.0366 |
|  | Liniaritate_Bord jos 0.0005 | 0.0000 | 0.0030 | | - 0.0005 |

| | | | | | | | | | |
|-----|----------------------------------------|-----------------------------------------|-------------|--------|---|--|--|--|--|
| 102 | BATAIE PLANABORD 2 | Dispozitiv ceas comparator | 0,065 | 0,02 | 7 | | | | |
| 110 | INCLINATIE BORD 1 | Masina de masurat in coordonate 3D | 0,02670,004 | 0,0286 | 7 | | | | |
| 112 | INCLINATIE BORD 2 | Masina de masurat in coordonate 3D | 0,02670,004 | 0,0244 | 7 | | | | |
| 120 | LATIME BORD | Micrometru | 4,9-4,15 | 4,86 | 7 | | | | |
| 130 | RUGOZITATE (RA) BORD 1 - supr fr. | Rugozimetru | 0,8 | 0,363 | 7 | | | | |
| 132 | RUGOZITATE (RA) BORD 2 - supr fr. | Rugozimetru | 0,9 | 0,363 | 7 | | | | |
| 156 | CONTUR CRESTATURA | Verificare vizuala + ac de trasat | 1.0 | CP | 7 | | | | |
| 180 | CIRCULARITATE CDR | Sina cu ceas | 0,04 | 0,02 | 7 | | | | |
| 182 | PARALELISM DME CALE DE RULARE | Sina cu ceas | 0,020 | 0,01 | 7 | | | | |
| 210 | BATAIE RADIALA / variatia grosimii CDR | Dispozitiv ceas comparator | 0,03 | 0,01 | 7 | | | | |
| 230 | BAVURA | Verificare vizuala + ac de trasat / dom | 1.0 | 1.0 | 7 | | | | |

Piesa de protocol se promoveaza la pas ulterior de proces:

Da

Nu

Date of last part inspection /
Data inspectie ultima piesa:

Production / Quality /
Productie / Calitate

Derogare nr.: _____

Nr. piese / perioada: _____ Nr.SAP comenzi: _____

Remarks / Observatii:

In caz de autocontrol, este necesara semnatura operatorului de la masina; in caz contrar, este necesara deasemenea semnatura personalului de Calitate (ex. semnatura personalului din laboratorul de masurari pe protocol de masurare).

Aparatele de masura trebuie etalonate o data pe schimb cu exceptia celor care au prevazuta completare fise de plauzibilitate 1/zi.

In caz de neconformitate raportati-va la IN ISB 72009.

In caz de neconformitate a unui mijloc de masurare se reactioneaza conform IN ISB 20054.

Rubricile ce nu trebuie completate la operatia in curs vor fi marcate: "n.a."(neaplicabil)

Piesa de protocol se va pastra la masa de control, acolo unde este posibil, pe intreaga durata a valabilitatii protocolului. Decizia cu privire la utilizarea ulterioara a piesei de protocol apartine segmentului.

Piesele vor fi blocate pana la finalizarea tuturor masuratorilor si verificarilor solicitate in "Protocolul de aprobare proces si inspectie ultima piese".

Piesele produse sub incidenta regulilor mentionate mai sus, pot fi deblocate doar dupa validarea si semnarea "Protocolului de aprobare proces si inspectie ultima piese".


Marcajul "X" - reprezinta faptul ca acea caracteristica a fost verificata. Coloana in care este positionat X-ul reprezinta decizia luata in urma verificarii caracteristicii (i.O / n.i.O)

Protocolul de aprobare este valabil pe toata durata fabricatiei lotului / loturilor cu aceeasi referinta sau prin extindere 1 luna, cu exceptia cazurilor in care exista o schimbare de reper, cand se produce o avarie suficient de grava (dupa indicatiile departamentului de calitate), cand au loc opriri prelungite (mai mult de 48h) sau cand exista schimbari de scule.

| | | | |
|--------------------------------|-------|------------|----------------------------------------|
| Cerut de: | Data: | Ora: | Semnatura: |
| Prevazut pentru: | Data: | Ora: | Semnatura: |
| Pregatit de: | Data: | | Semnatura: |
| Verificat de: | Data: | | Semnatura: |
| Verificat de catre pregatitor: | Data: | | Semnatura: |
| Versiunea:A | Data: | 03.07.2020 | Elaborat: Iepadadr Validat: Cristea P. |

SETUP APPROVAL AND LAST PART INSPECTION PROTOCOL
PROTOCOL DE APROBARE PROCES SI INSPECTIE ULTIMA PIESA

SCHAEFFLER

| | | | | | | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------|------------------------------|-----------|-------|--|-----|-----------|
| Part name / Denumire piesa: | | IR.8L102084-TB-0011 | | Order / Comanda: | | 2894246 | | | | | |
| Article no. / Nr. reper: | | | | Quantity / Cantitate: | | 55 | | | | | |
| Drawing no. / Numar desen: | | 205 SL152985-TB-0012.1'SB | | Machine set-up / Reglaj masina cu parametrii proces conformi: | | | | | | | |
| Revision and date / Revizia si date: | | 000/02-03-2012 | | Measuring devices set-up / Reglat dispozitive de masurare: | | | | | | | |
| Machine no. / Nr. masina: 024630/1 | | | | Manufacturing process step / Etapa de lucru: | | str_dura | | | | | |
| VALID ALSO FOR ORDER / VALABIL SI PENTRU COMANDA: | | | | Order Mess / Comanda Mess: | | | | | | | |
| The machine was decontaminated by the scrap / rework parts from the previous order. / Masina a fost decontaminata de piesele rebut / reprelucrate de la comanda anterioara. X | | | | | | | | | | | |
| The documents from the previous order were removed. / Documentele de la comanda anterioara au fost retrase. X | | | | | | | | | | | |
| The supplied parts are identified and conform. / Piesele aprovizionate sunt identificate si conforme. X | | | | | | | | | | | |
| The measuring devices are clean and calibrated. / Dispozitivele de masurare sunt calibrate si curate. X | | | | | | | | | | | |
| The part was inspected according the mentioned drawing (results below). / Piesa a fost inspectata conform desenului mentionat (rezultatele in continuare). Y | | | | | | | | | | | |
| If necessary documentation is available at manufacturing place. / Toata documentatia necesara este disponibila la locul de munca. Y | | | | | | | | | | | |
| Personnel was trained regarding the usage of machine and measurement devices. / Personalul a fost instruit in ceea ce priveste utilizarea masinii si a dispozitivelor de masurare. Y | | | | | | | | | | | |
| Measurement devices are valid as regards to the metrological confirmation and were verified before release regarding correct indication. / Dispozitivele de masurare sunt valide din punct de vedere confirmare metrologica si au fost verificate din punct de vedere al functionarii corecte. Y | | | | | | | | | | | |
| The parameter values of the machine are according with the setup plan values. / Valorile parametrilor din masina corespund cu valorile din fisa de parametri. X | | | | | | | | | | | |
| Date of first part approval / Data aprobare prima piesa: 18.08.2024 | | | | Production / Quality / Productie / Calitate  | | | | | | | |
| Nr. crt. | Characteristic / Caracteristica: | Measuring device/ Mijloc de masurare: | Specified / Specificat: | Measured / Masurat: | | | | | | | |
| | | | | First part / Prima piesa: | | Last part / Ultima piesa: | | | | | |
| | | | | SN/Nr | 26 | i.O | n.i. O | SN/Nr | | i.O | n.i. O |
| 4 | VERIFICARE IDENT. LA INTRARE | Verificare vizuala | I.O | 46 | 46 | Y | | | | | |
| 10 | CONTROL VIZUAL | Verificare vizuala | I.O | 10 | 10 | Y | | | | | |
| 60 | DIAMETRU INTERIOR | Sina cu ceas | 419,65 ^{±0,09} | 419,68 | 419,68 | X | | | | | |
| 62 | RUGOZITATE DIAMETRU INTERIOR | Rugozimetru | 6,3 | 2,1498 | 2,1498 | Y | | | | | |
| 64 | PARALELISM DIAMETRU INTERIOR | Sina cu ceas | 0,020 | 0,01 | 0,01 | Y | | | | | |
| 66 | CIRCULARITATE DIAMETRU INTERIOR | Sina cu ceas | 0,109 | 0,02 | 0,02 | X | | | | | |
| 70 | DIAMETRU CALE DE RULARE | Sina cu ceas | 444,26 ^{±0,09} | 444,23 | 444,23 | Y | | | | | |
| 72 | RUGOZITATE CALE DE RULARE | Rugozimetru | 6,3 | 2,1592 | 2,1592 | Y | | | | | |
| 80 | LATIME CALE DE RULARE | Set cale plan paralele | 62,05 ^{±0,05} | 1 P | 1 P | X | | | | | |
| 90 | LINIARITATE BORD 1 | Masina de masurat in coordonate 3D | 0,003 | 0,0008 | 0,0008 | Y | | | | | |
| 92 | LINIARITATE BORD 2 | Masina de masurat in coordonate 3D | 0,003 | 0,0005 | 0,0005 | Y | | | | | |
| 100 | BATAIE PLANABORD 1 | Dispozitiv ceas comparator | 0,065 | 0,02 | 0,02 | Y | | | | | |