INTERNATIONAL STANDARD ISO 17123-4

Optics and optical instruments – Field procedures for testing geodetic and surveying instruments

Part 4: Electro-optical distance meters (EDM instruments)

**Full test procedure**

|  |  |  |  |  |  |  |  |
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|   | Cálculo das distâncias entre o aparelho e os prismas, dependendo da unidade de comprimento (unit length) U do EDMd0=600 m; λ=\_\_\_\_; β0=(d0 -6.5\*λ)/15=\_\_\_\_; β=int(β0)=\_\_\_\_; γ=λ/72=\_\_\_\_d1=λ+β+3γ=\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d2=λ+3β+7γ=\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d3=λ+5β+11γ=\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d4=λ+4β+9γ=\_\_\_\_\_\_\_\_\_\_\_\_\_\_d5=λ+2β+5γ=\_\_\_\_\_\_\_\_\_\_\_\_\_­ d6=λ+γ=\_\_\_\_\_\_\_\_\_\_\_\_\_\_d=6λ+15β+36γ=\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |
| --- |
| Data: \_\_\_\_ /\_\_\_\_\_ /\_\_\_\_ |
| Hora: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Grupo: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Operador: \_\_\_\_\_\_\_\_\_\_\_ |
| Aparelho: \_\_\_\_\_\_\_\_\_\_\_\_ |
| Condições atmosféricas: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

 |
| d1,2= | d1,3= | d1,4= | d1,5= | d1,6= | d1,7= |
|  | d2,3= | d2,4= | d2,5= | d2,6= | d2,7= |
|  |  | d3,4= | d3,5= | d3,6= | d3,7= |
|  |  |  | d4,5= | d4,6= | d4,7= |
|  |  |  |  | d5,6= | d5,7= |
|  |  |  |  |  | d6,7= |

|  |  |  |  |
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| a4= d1,5+ d2,6+ d3,7- d1,4- d2,5- d3,6- d4,7= |  | b1=(d1,2+d1,3+d1,4+d1,5+d1,6+d1,7)/7= |  |
| a5= d1,6+ d2,7- d1,3- d2,4- d3,5- d4,6-d5,7= |  | b2=(d2,3+d2,4+d2,5+d2,6+d2,7-d1,2)/7= |  |
| a6= d1,7- d1,2- d2,3- d3,4- d4,5-d5,6-d6,7= |  | b3=(d3,4+d3,5+d3,6+d3,7-d1,3-d2,3)/7= |  |
|  | b4=(d4,5+d4,6+d4,7-d1,4-d2,4-d3,4)/7= |  |
|  | b5=(d5,6+d5,7-d1,5-d2,5-d3,5-d4,5)/7= |  |
|  | b6=(d6,7-d1,6-d2,6-d3,6-d4,6-d5,6)/7= |  |
| δ=(a4+3a5+5a6)/35= |  | b7=(-d1,7-d2,7-d3,7-d4,7-d5,7-d6,7)/7= |  |

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| r1,2= b1-b2-5δ/7-d1,2 | r1,3= b1-b3-3δ/7-d1,3 | r1,4= b1-b4-δ/7-d1,4 | r1,5= b1-b5+δ/7-d1,5 | r1,6= b1-b6+3δ/7-d1,6 | r1,7= b1-b7+5δ/7-d1,7 |
|  |  |  |  |  |  |
|  | r2,3=b2-b3-5δ/7-d2,3 | r2,4=b2-b4-3δ/7-d2,4 | r2,5=b2-b5- δ/7-d2,5 | r2,6=b2-b6+ δ/7-d2,6 | r2,7=b2-b7+3δ/7-d2,7 |
|  |  |  |  |  |
|  |  | r3,4=b3-b4-5δ/7-d3,4 | r3,5=b3-b5-3δ/7-d3,5 | r3,6=b3-b6- δ/7-d3,6 | r3,7=b3-b7+ δ/7-d3,7 |
|  |  |  |  |
|  |  |  | r4,5=b4-b5-5δ/7-d4,5 | r4,6=b4-b6-3δ/7-d4,6 | r4,7=b4-b7- δ/7-d4,7 |
|  |  |  |
|  |  |  |  | r5,6=b5-b6-5δ/7-d5,6 | r5,7=b5-b7-3δ/7-d5,7 |
|  |  |
|  |  |  |  |  | r6,7=b6-b7-5δ/7-d6,7 |
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| $\sum\_{}^{}r^{2}=r\_{1,2}^{2}+r\_{1,3}^{2}+r\_{1,4}^{2}+r\_{1,5}^{2}+r\_{1,6}^{2}+r\_{1,7}^{2}+r\_{2,3}^{2}+r\_{2,4}^{2}+r\_{2,5}^{2}+r\_{2,6}^{2}+r\_{2,7}^{2}+r\_{3,4}^{2}+r\_{3,5}^{2}+\_{3,6}^{2}+r\_{3,7}^{2}+r\_{4,5}^{2}+r\_{4,6}^{2}+r\_{4,7}^{2}+r\_{5,6}^{2}+r\_{5,7}^{2}+r\_{6,7}^{2}=$  |
| ν=n-u=21-7=14 |  |