INTERNATIONAL STANDARD ISO 17123-2

Optics and optical instruments – Field procedures for testing geodetic and surveying instruments – Parte2: Levels

**Full test procedure**

Antes de iniciar o teste, permitir que o aparelho se aclimatize à temperatura ambiente (2 minutos/grau na diferença de temperatura). De forma a manter a influência da refracção tão pequena quanto possível, seleccionar uma área de teste razoavelmente horizontal, devendo o solo ser compacto e uniforme (evitar superfícies cobertas por asfalto ou cimento). No caso do o Sol incidir directamente, o aparelho deve ser protegido por um guarda-sol. O aparelho deve ser colocado numa posição aproximadamente equidistante relativamente às miras (30 m ± 3 m). Entre cada par de observações o aparelho deve mudar ligeiramente de posição.

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| Data: \_\_\_\_ /\_\_\_\_\_ /\_\_\_\_  Hora: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Grupo: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  Operador: \_\_\_\_\_\_\_\_\_\_\_  Aparelho: \_\_\_\_\_\_\_\_\_\_\_\_  Condições atmosféricas: \_\_\_\_\_\_\_\_­­­­­\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | | 1 |  |  |  |  | | 2 |  |  |  |  | | 3 |  |  |  |  | | 4 |  |  |  |  | | 5 |  |  |  |  | | 6 |  |  |  |  | | 7 |  |  |  |  | | 8 |  |  |  |  | | 9 |  |  |  |  | | 10 |  |  |  |  | | trocar miras de posição | | | | | | 11 |  |  |  |  | | 12 |  |  |  |  | | 13 |  |  |  |  | | 14 |  |  |  |  | | 15 |  |  |  |  | | 16 |  |  |  |  | | 17 |  |  |  |  | | 18 |  |  |  |  | | 19 |  |  |  |  | | 20 |  |  |  |  | | trocar miras de posição | | | | | |  |  |  |  |  | |  |  |  |  |  | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | | 21 |  |  |  |  | | 22 |  |  |  |  | | 23 |  |  |  |  | | 24 |  |  |  |  | | 25 |  |  |  |  | | 26 |  |  |  |  | | 27 |  |  |  |  | | 28 |  |  |  |  | | 29 |  |  |  |  | | 30 |  |  |  |  | | trocar miras de posição | | | | | | 31 |  |  |  |  | | 32 |  |  |  |  | | 33 |  |  |  |  | | 34 |  |  |  |  | | 35 |  |  |  |  | | 36 |  |  |  |  | | 37 |  |  |  |  | | 38 |  |  |  |  | | 39 |  |  |  |  | | 40 |  |  |  |  | |  | | | | | |  |  |  |  |  | |  |  |  |  |  | |

(a diferençanão tem influência no desvio padrão experimental s do desnível observado mas é um indicador da diferença nas origens das duas miras)

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| 1. O desvio padrão experimental s é menor do que o correspondente valor σ indicado pelo fabricante ou que outro valor previamente determinado? 2. Dois desvios padrão experimentais s e determinados a partir de duas amostras diferentes de observações pertencem à mesma população, supondo que ambas as amostras têm o mesmo número de graus de liberdade?   (os valores s e podem ser obtidos através de duas amostras observadas com o mesmo aparelho mas diferentes operadores, de duas amostas observadas com o mesmo aparelho em ocasiões diferentes ou de duas amostras observadas por aparelhos diferentes)   1. A diferença δ na origem das duas miras é igual a zero? |

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|  | Hipótese nula | Hipótese alternativa |
| a) | s < σ | s ≥ σ |
| b) | s = | s ≠ |
| c) | δ = 0 | δ |

Para os testes seguintes adopta-se o nível de significân cia 1-α=0.95 e, de acordo com as observações realizadas, o número de graus de liberdade é ν=38.

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| 1. A hipótese nula não é rejeitada se: s 2. A hipótese nula não é rejeitada se : <1.91 3. A hipótese nula não é rejeitada se: , com sendo o desvio padrão experimental de δ |