



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

NASIONALE SENIOR SERTIFIKAAT

GRAAD 12

INGENIEURSGRAFIKA EN -ONTWERP V2

NOVEMBER 2009

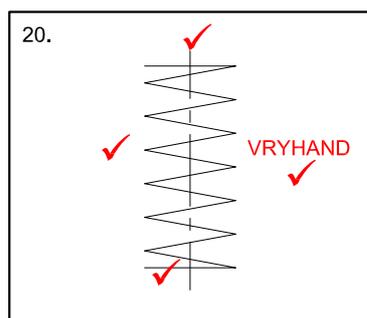
MEMORANDUM

PUNTE: 200

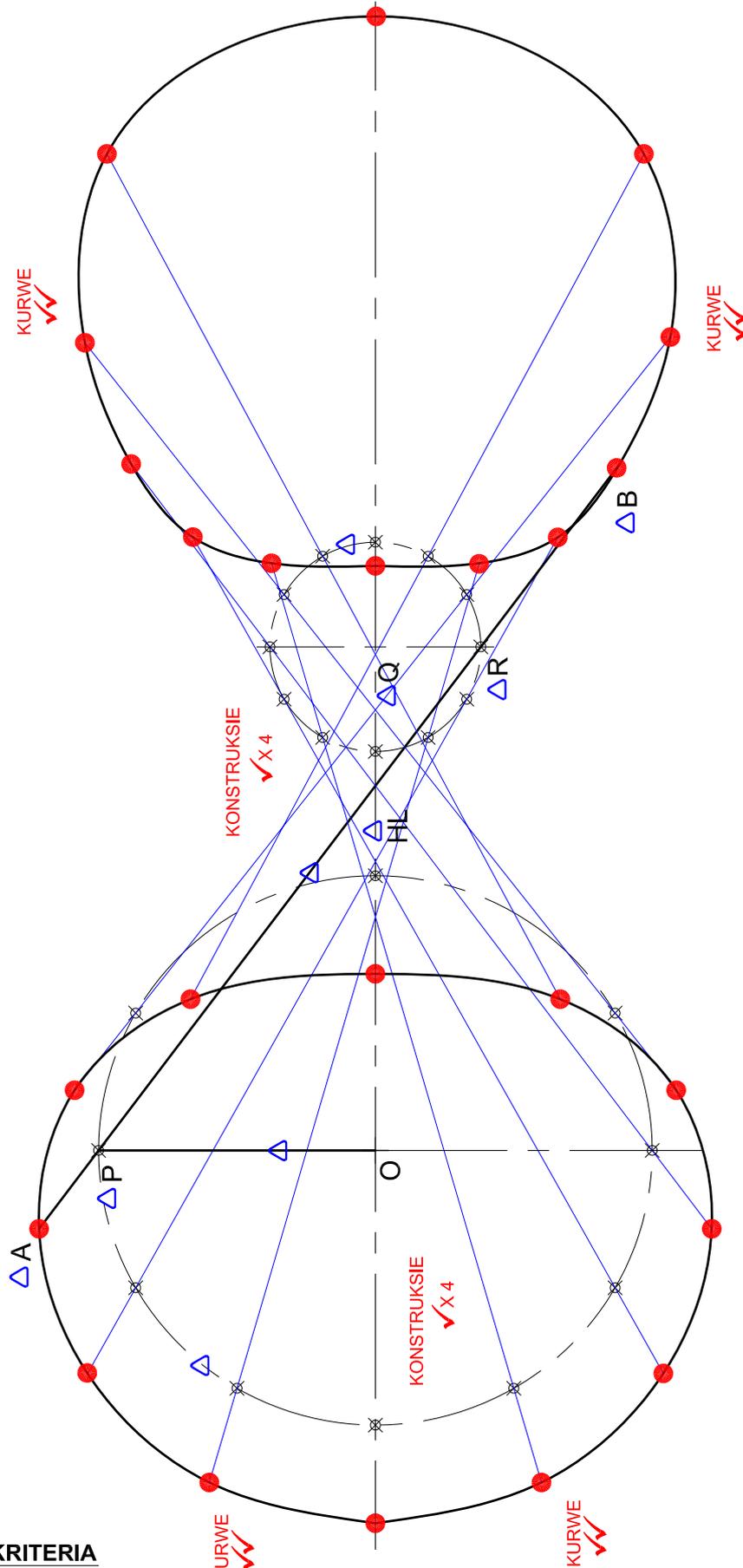
Hierdie memorandum bestaan uit 5 bladsye.

| ANTWOORDE | | |
|-----------|--|---|
| 1 | 12/05/2009 | 1 |
| 2 | CARLA | 1 |
| 3 | DIAFRAGMAREGULEERDER | 1 |
| 4 | 1:2 | 1 |
| 5 | GEELKOPER ("BRASS") | 1 |
| 6 | 5 | 1 |
| 7 | 10 | 1 |
| 8 | 3DEHOEKSE ORTOGRAFIESE PROJEKSIE | 1 |
| 9 | REGTERAANSIG | 1 |
| 10 | BOAANSIG | 1 |
| 11 | Ø60 | 1 |
| 12 | Ø10 | 1 |
| 13 | A: Ø14 B: Ø30 C: Ø64 D:Ø20 E: M12 F: 107 | 6 |
| 14 | SNYVLAK | 1 |
| 15 | AFMETING | 1 |
| 16 | GEDEELTELIKE SNIT | 1 |
| 17 | GEEN MASJINERING | 2 |
| 18 | | 4 |
| 19 | 0,25 | 1 |
| 20 | 34,25 | 2 |

TOTAAL: 30



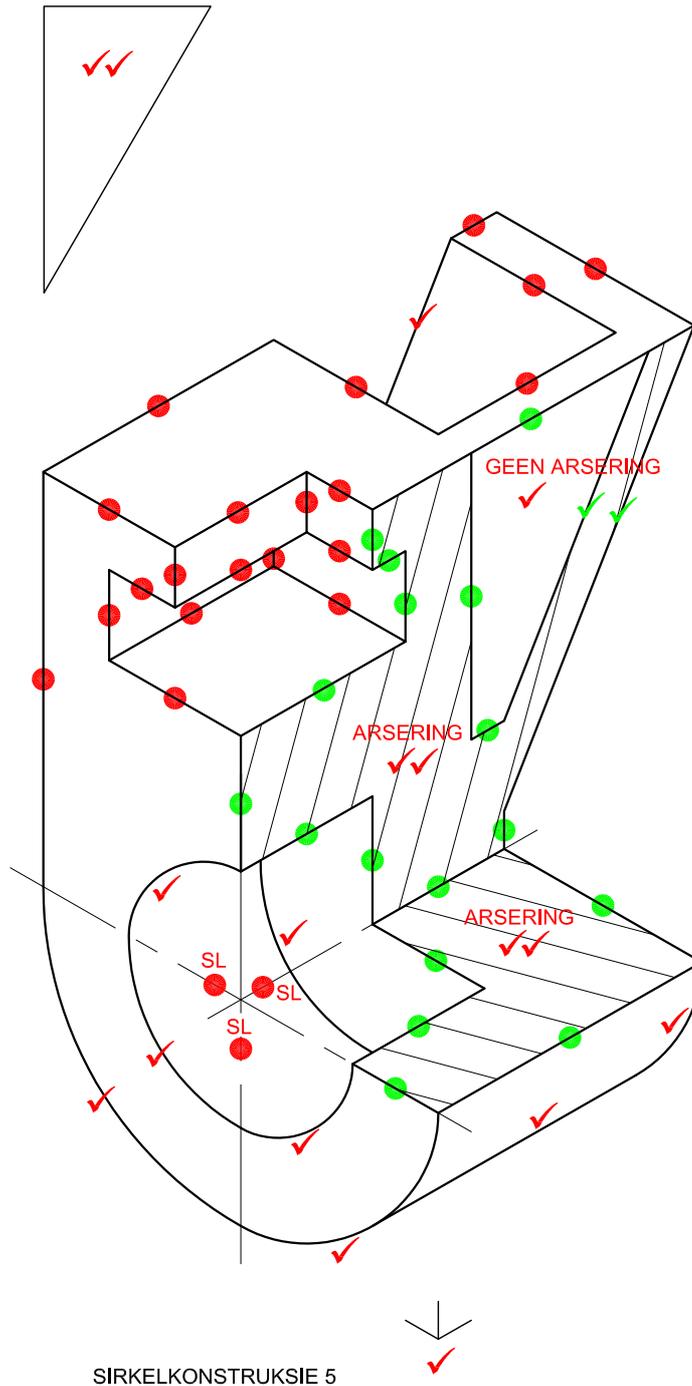
VRAESTEL 2 VRAAG 1
GRAAD 12 NOVEMBER 2009
MEMORANDUM



ASSESSERINGSKRITERIA

| | |
|--------------------|-----------|
| GEGEWE + BYSKRIFTE | 5 |
| KONSTRUKSIE | 8 |
| LOKUS A + KURWE | 10 |
| LOKUS B + KURWE | 10 |
| TOTAAL | 33 |

VRAESTEL 2 VRAAG 2
GRAAD 12 NOVEMBER 2009
MEMORANDUM

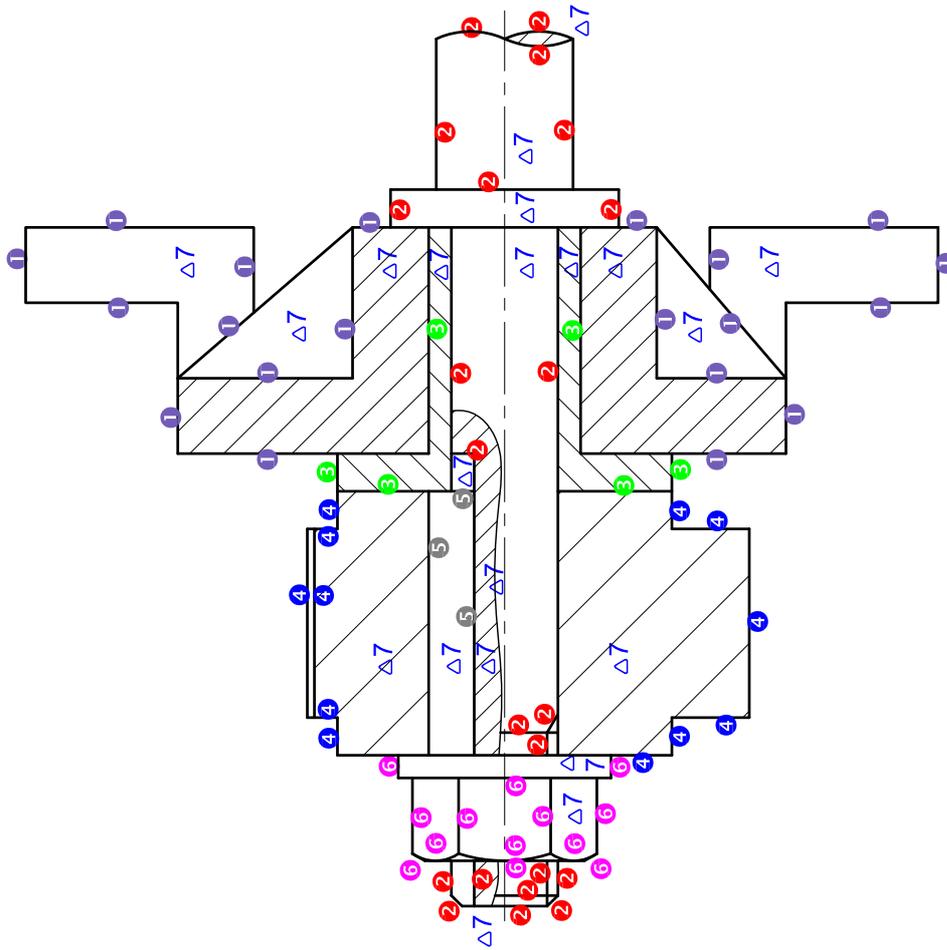


SIRKELKONSTRUKSIE 5

ASSESSERINGSKRITERIA

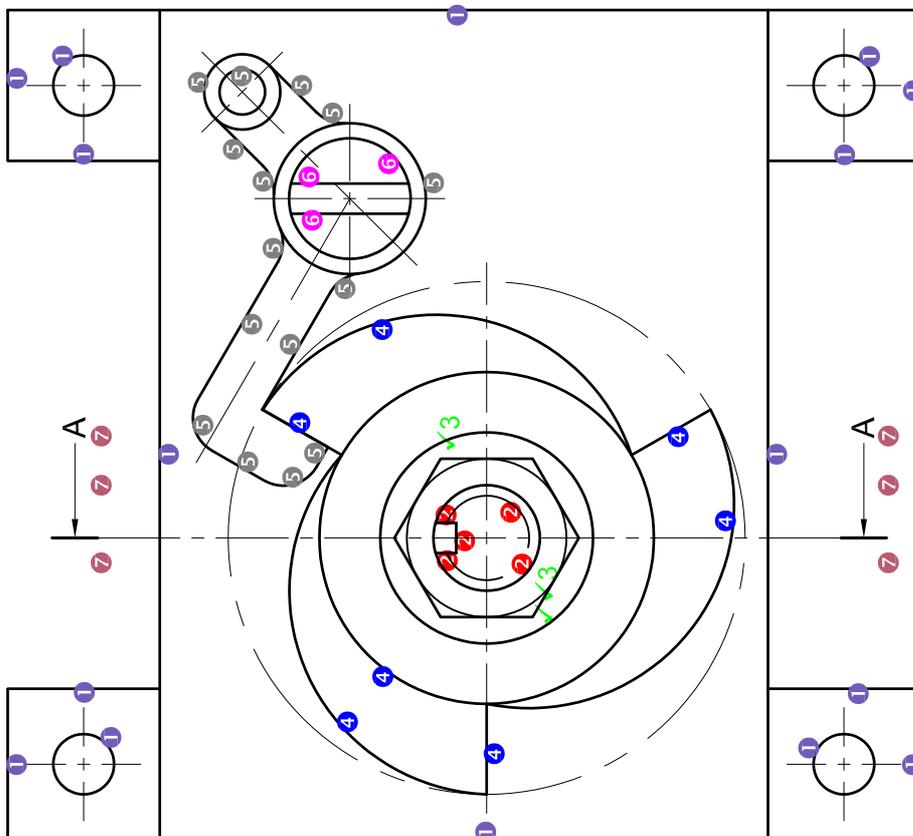
| | |
|----------------------------------|-----------|
| KONSTRUKSIE + HULPAANSIG + B | 8 |
| ISOMETRIESE SIRKELS + SENTERLYNE | 8½ |
| ISO' + NIE-ISOMETRIESE LYNE | 12 |
| SNITVLAKKE | 10½ |
| ARSERING | 5 |
| TOTAAL | 44 |

VRAESTEL 2 VRAAG 3
GRAAD 12 NOVEMBER 2009
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SNITAANSIG

| | |
|----------------------|-----|
| 1. BASIS | 10 |
| 2. AS | 11 |
| 3. BUS | 3 |
| 4. SPERRAT | 6 |
| 5. SPY | 1½ |
| 6. WASTER + M14-MOER | 6½ |
| 7. ARSERING | 10½ |



VOORAANSIG

| | |
|----------------------|----|
| 1. BASIS | 8 |
| 2. AS | 2½ |
| 3. WASTER + M14-MOER | 3 |
| 4. SPERRAT | 3½ |
| 5. SPERRATARM | 7½ |
| 6. PEN | 1½ |
| 7. SNYVLAK A-A | 3 |
| SENTERLYNE | 7½ |
| SAMESTELLING | 6 |
| 3DEHOEKS | 2 |
| TOTAAL: 93 | |

VRAESTEL 2 VRAAG 4
GRAAD 12 NOVEMBER 2009
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