

Prestatieverklaring

DOP-certificatienummer: TKMN001

1. Productnaam en identificatiecode:

Warmgewalste producten van constructie staal, EN 10025-1:2019
Types S235/S275/S355,
Waarden JR/JO/J2

2. Naam en Productieadres:

ThyssenKrupp Materials Nederland B.V.
Taylorweg 7
5466 AE Veghel
(NL)

3. Toepassing:

In fabrieksconstructies met bouten en klinknagels

4. Systeem voor beoordeling en verificatie van de constante prestaties van het product:

Systeem 2+

5. Ingelicht orgaan:

KIWA, ingelicht orgaan Nr. 0620
Beoordeling en evaluatie van fabrieksproductiecontrole voor het systeem 2+

Controlecertificaat Fabrieksproductie 0620-CPR-85673/01 uitgegeven op 9 januari 2015.

De productprestaties zoals omschreven in punt 1 komen overeen met de prestaties zoals verklaard in punt 6.

Deze prestatieverklaring wordt uitgegeven onder de volledige verantwoordelijkheid van de fabrikant zoals aangegeven in punt 2.

6. Verklaarde prestaties:

| Voornaamste kenmerken | Prestaties | | | Geharmoniseerde technische specificatie | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--------------------|----------|---|---|--------------------|------------------------|-----------|--------------|-----------|-------------|--------------|------------------|----------|---------------|-----------------|------|-----|------|-------|-------|-------|------|--------|------|------|----|------|-------|-------|-------|------|--------|------|------|----|------|-------|-------|-------|------|--------|------|------|----|------|-------|-------|-------|------|--------|------|------|----|------|-------|-------|-------|------|--------|------|------|------|------|-------|-------|-------|------|--------|------|------|------|------|-------|-------|----|------|
| Afmeting- en vormtoleranties | <table border="1"> <tr><td>EN 10056-1</td><td>Gelijkszijdige en ongelijkszijdige hoeken</td></tr> <tr><td>EN 10058</td><td>Platte staven</td></tr> <tr><td>EN 10060</td><td>Ronde staven</td></tr> <tr><td>EN 10279</td><td>U-profielen</td></tr> <tr><td>EN 10034</td><td>I-en H-profielen</td></tr> <tr><td>EN 10024</td><td>INP-profielen</td></tr> </table> | | | EN 10056-1 | Gelijkszijdige en ongelijkszijdige hoeken | EN 10058 | Platte staven | EN 10060 | Ronde staven | EN 10279 | U-profielen | EN 10034 | I-en H-profielen | EN 10024 | INP-profielen | EN 10025-1:2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EN 10056-1 | Gelijkszijdige en ongelijkszijdige hoeken | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EN 10058 | Platte staven | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EN 10060 | Ronde staven | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EN 10279 | U-profielen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EN 10034 | I-en H-profielen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EN 10024 | INP-profielen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Breukrek(%) | <table border="1"> <thead> <tr> <th>Type en Waarde</th> <th>Normale dikte (mm)</th> </tr> </thead> <tbody> <tr><td></td><td>≥40</td></tr> <tr><td>S235JR/JO</td><td>26</td></tr> <tr><td>S275JR/JO</td><td>23</td></tr> <tr><td>S355JR/JO/J2</td><td>22</td></tr> </tbody> </table> | | | Type en Waarde | Normale dikte (mm) | | ≥40 | S235JR/JO | 26 | S275JR/JO | 23 | S355JR/JO/J2 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type en Waarde | Normale dikte (mm) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ≥40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S235JR/JO | 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S275JR/JO | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S355JR/JO/J2 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Treksterkte (MPa) | <table border="1"> <thead> <tr> <th>Type en Waarde</th> <th>Normale dikte (mm)</th> </tr> </thead> <tbody> <tr><td></td><td>≥100</td></tr> <tr><td>S235JR/JO</td><td>360 tot 510</td></tr> <tr><td>S275JR/JO</td><td>410 tot 560</td></tr> <tr><td>S355JR/JO/J2</td><td>470 tot 630</td></tr> </tbody> </table> | | | Type en Waarde | Normale dikte (mm) | | ≥100 | S235JR/JO | 360 tot 510 | S275JR/JO | 410 tot 560 | S355JR/JO/J2 | 470 tot 630 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type en Waarde | Normale dikte (mm) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ≥100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S235JR/JO | 360 tot 510 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S275JR/JO | 410 tot 560 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S355JR/JO/J2 | 470 tot 630 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vloei grens (MPa) | <table border="1"> <thead> <tr> <th>Type en Waarde</th> <th colspan="2">Normale dikte (mm)</th> </tr> <tr> <td></td> <th>≤16</th> <th>>16 ≤40</th> </tr> </thead> <tbody> <tr><td>S235JR/JO</td><td>235</td><td>225</td></tr> <tr><td>S275JR/JO</td><td>275</td><td>265</td></tr> <tr><td>S355JR/JO/J2</td><td>355</td><td>345</td></tr> </tbody> </table> | | | Type en Waarde | Normale dikte (mm) | | | ≤16 | >16 ≤40 | S235JR/JO | 235 | 225 | S275JR/JO | 275 | 265 | S355JR/JO/J2 | 355 | 345 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type en Waarde | Normale dikte (mm) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ≤16 | >16 ≤40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S235JR/JO | 235 | 225 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S275JR/JO | 275 | 265 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S355JR/JO/J2 | 355 | 345 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stootweerstand (J) | <table border="1"> <thead> <tr> <th>Type en Waarde</th> <th>Temperatuur °C</th> <th>Normale dikte (mm)</th> </tr> </thead> <tbody> <tr><td></td><td></td><td>≤150</td></tr> <tr><td>S235JR/JO</td><td>20</td><td>27</td></tr> <tr><td>S275JR/JO</td><td>0</td><td>27</td></tr> <tr><td>S355JR/JO/J2</td><td>-20</td><td>27</td></tr> </tbody> </table> | | | Type en Waarde | Temperatuur °C | Normale dikte (mm) | | | ≤150 | S235JR/JO | 20 | 27 | S275JR/JO | 0 | 27 | S355JR/JO/J2 | -20 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type en Waarde | Temperatuur °C | Normale dikte (mm) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | ≤150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S235JR/JO | 20 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S275JR/JO | 0 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S355JR/JO/J2 | -20 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lasbaarheid (Chemische samenstelling) | <table border="1"> <thead> <tr> <th>Type en Waarde</th> <th>CEV % Max.</th> </tr> </thead> <tbody> <tr><td></td><td>Normale dikte (mm) ≤40</td></tr> <tr><td>S235JR/JO</td><td>0,35</td></tr> <tr><td>S275JR/JO</td><td>0,40</td></tr> <tr><td>S355JR/JO/J2</td><td>0,45</td></tr> </tbody> </table> | | | Type en Waarde | CEV % Max. | | Normale dikte (mm) ≤40 | S235JR/JO | 0,35 | S275JR/JO | 0,40 | S355JR/JO/J2 | 0,45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type en Waarde | CEV % Max. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Normale dikte (mm) ≤40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S235JR/JO | 0,35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S275JR/JO | 0,40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S355JR/JO/J2 | 0,45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Duurzaamheid (Chemische samenstelling) | <table border="1"> <thead> <tr> <th rowspan="2">Type en Waarde</th> <th colspan="2">C% max.</th> <th rowspan="2">Si % max</th> <th rowspan="2">Mn % max</th> <th rowspan="2">P % max</th> <th rowspan="2">S % max</th> <th rowspan="2">N % max</th> <th rowspan="2">Cu % max</th> </tr> <tr> <th>≤16</th> <th>>16 ≤40</th> </tr> </thead> <tbody> <tr><td>S235JR</td><td>0,19</td><td>0,19</td><td>--</td><td>1,50</td><td>0,045</td><td>0,045</td><td>0,014</td><td>0,60</td></tr> <tr><td>S235JO</td><td>0,19</td><td>0,19</td><td>--</td><td>1,50</td><td>0,040</td><td>0,040</td><td>0,014</td><td>0,60</td></tr> <tr><td>S275JR</td><td>0,24</td><td>0,24</td><td>--</td><td>1,60</td><td>0,045</td><td>0,045</td><td>0,014</td><td>0,60</td></tr> <tr><td>S275JO</td><td>0,21</td><td>0,21</td><td>--</td><td>1,60</td><td>0,040</td><td>0,040</td><td>0,014</td><td>0,60</td></tr> <tr><td>S355JR</td><td>0,27</td><td>0,27</td><td>--</td><td>1,70</td><td>0,045</td><td>0,045</td><td>0,014</td><td>0,60</td></tr> <tr><td>S355JO</td><td>0,23</td><td>0,23</td><td>0,60</td><td>1,70</td><td>0,040</td><td>0,040</td><td>0,014</td><td>0,60</td></tr> <tr><td>S355J2</td><td>0,23</td><td>0,23</td><td>0,60</td><td>1,70</td><td>0,035</td><td>0,035</td><td>--</td><td>0,60</td></tr> </tbody> </table> | | | Type en Waarde | C% max. | | Si % max | Mn % max | P % max | S % max | N % max | Cu % max | ≤16 | >16 ≤40 | S235JR | 0,19 | 0,19 | -- | 1,50 | 0,045 | 0,045 | 0,014 | 0,60 | S235JO | 0,19 | 0,19 | -- | 1,50 | 0,040 | 0,040 | 0,014 | 0,60 | S275JR | 0,24 | 0,24 | -- | 1,60 | 0,045 | 0,045 | 0,014 | 0,60 | S275JO | 0,21 | 0,21 | -- | 1,60 | 0,040 | 0,040 | 0,014 | 0,60 | S355JR | 0,27 | 0,27 | -- | 1,70 | 0,045 | 0,045 | 0,014 | 0,60 | S355JO | 0,23 | 0,23 | 0,60 | 1,70 | 0,040 | 0,040 | 0,014 | 0,60 | S355J2 | 0,23 | 0,23 | 0,60 | 1,70 | 0,035 | 0,035 | -- | 0,60 |
| Type en Waarde | C% max. | | Si % max | | Mn % max | P % max | | | | | | | S % max | N % max | Cu % max | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ≤16 | >16 ≤40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S235JR | 0,19 | 0,19 | -- | 1,50 | 0,045 | 0,045 | 0,014 | 0,60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S235JO | 0,19 | 0,19 | -- | 1,50 | 0,040 | 0,040 | 0,014 | 0,60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S275JR | 0,24 | 0,24 | -- | 1,60 | 0,045 | 0,045 | 0,014 | 0,60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S275JO | 0,21 | 0,21 | -- | 1,60 | 0,040 | 0,040 | 0,014 | 0,60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S355JR | 0,27 | 0,27 | -- | 1,70 | 0,045 | 0,045 | 0,014 | 0,60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S355JO | 0,23 | 0,23 | 0,60 | 1,70 | 0,040 | 0,040 | 0,014 | 0,60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S355J2 | 0,23 | 0,23 | 0,60 | 1,70 | 0,035 | 0,035 | -- | 0,60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Ondertekend voor en namens de fabrikant:



R.C.M. Custers
Staf Specialist kwaliteit en Milieu
Veghel, 1 februari 2020