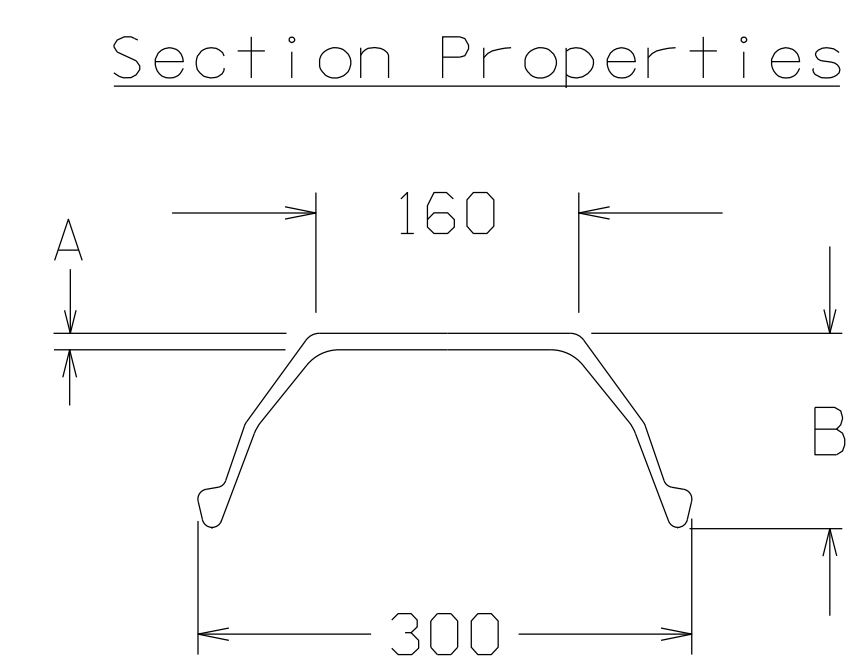


| No. | 'e' TYPE ASSEMBLY COMPONENTS | PART No. |
|-----|--------------------------------------|----------|
| 1 | 'e' TYPE RAIL CLIP | 'e' CLIP |
| 2 | NARSTCO CAST HOOK-IN SHOULDER (12mm) | 4080 |
| 3 | NARSTCO CAST HOOK-IN SHOULDER (12mm) | 4030 |
| 4 | INSULATOR | |
| 5 | RAIL PAD | |

NARSTCO
TIE CODE
MM-YY USA
Stamp Detail

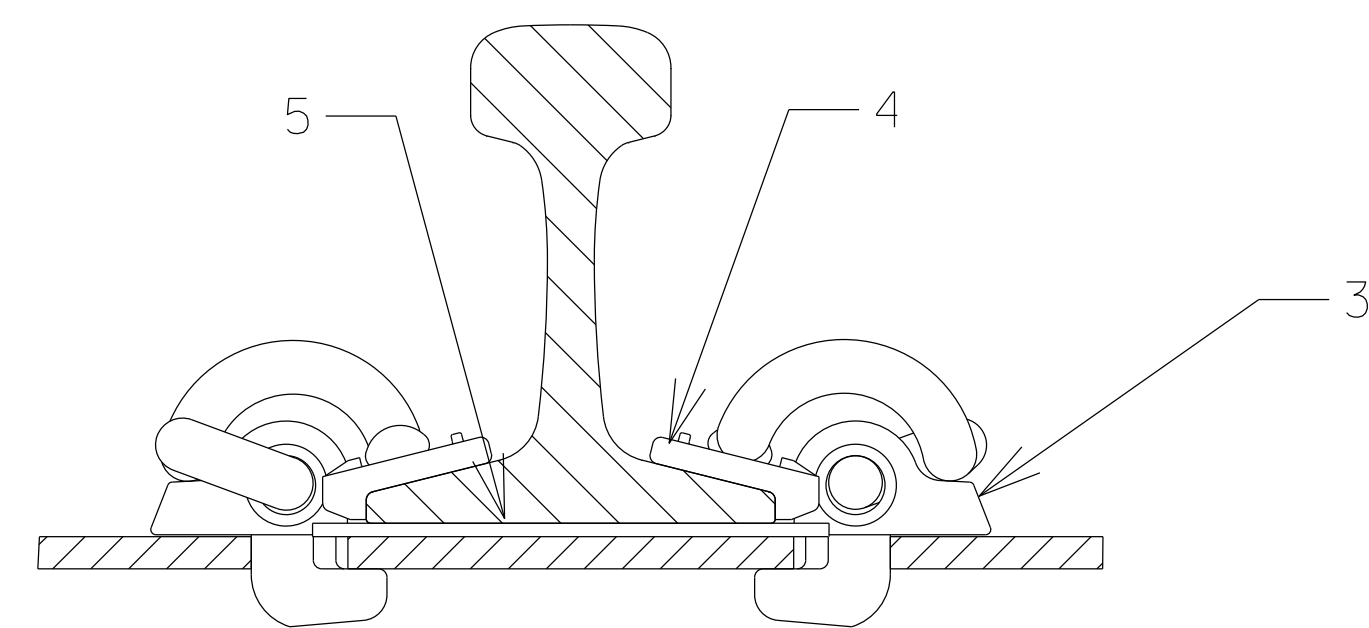


| Section: | H12 |
|--|----------|
| Dimension 'A' mm | 12 |
| Dimension 'B' mm | 120 |
| Weight of tie - kg / lb | 96.2/212 |
| Weight of bar - kg/m | 35.3 |
| Yield strength - MPa (min) | 250 |
| Section moduli - Z Top*10 ³ mm ³ | 175 |
| - Z Bot*10 ³ mm ³ | 88.4 |

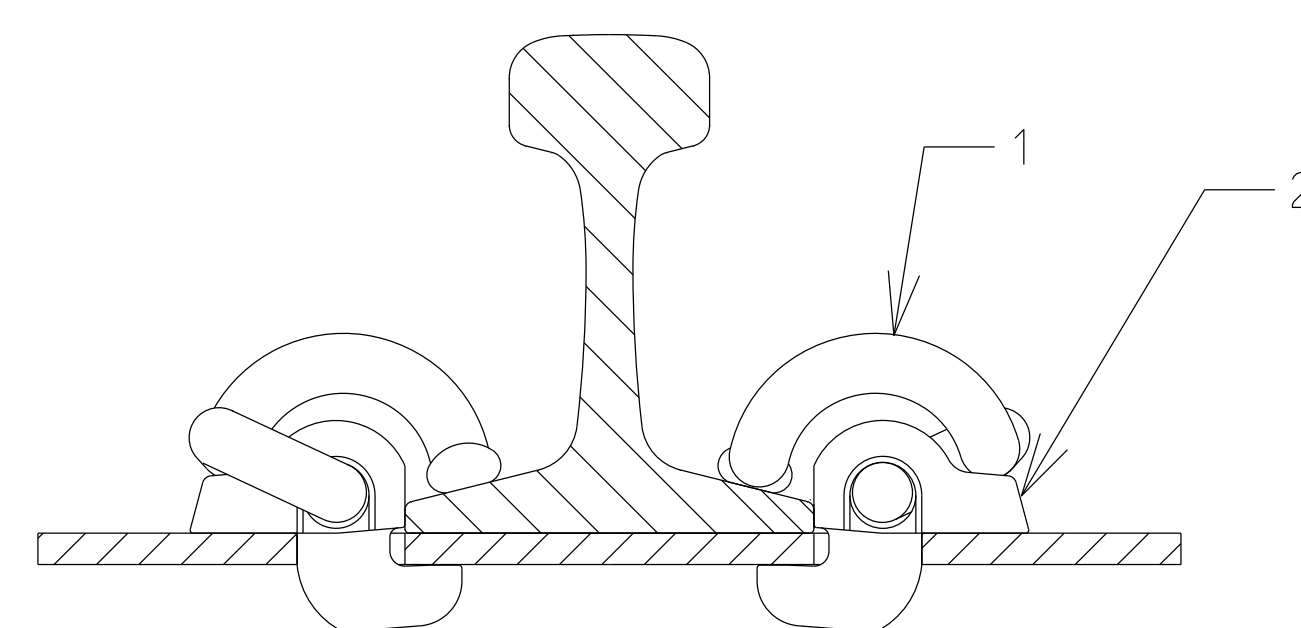
NOTE:

* Rail seat area canted to specification i.e. 1:20, 1:30, 1:40

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Typical Insulated Rail Assembly



Typical Uninsulated Rail Assembly

| REV. | DATE | DESCRIPTION | EC# |
|------|----------|---|---------|
| 03 | 05-30-13 | Updated weight of bar, weight of tie. | EC13-13 |
| 02 | 06-16-11 | Spade angle updated from 68° to 70° | SS |
| 01 | 07-30-10 | Error corrected, changes HIS number from 4060 to 4080 | SS |



| CLIENT | | | DWG. NO. | REV. |
|----------|----------|--------------|--|-------|
| STANDARD | | | 1059 | 03 |
| DRAWN | APPROVED | DATE | TITLE | |
| SS | SK | OCT. 8, 2008 | H12 STEEL TIE FOR INSULATED AND UNINSULATED APPLICATIONS WITH 'e' CLIP FASTENING SYSTEM AND 190mm DEEP SPADE | |
| | | | FILE | SCALE |
| | | | S2/V8 DRAWINGS/TIES/H-TIES/H12 | NONE |