

**Texas Steel Conversion TSDS 55 comparison with API 5 1/2 FH**

| Box OD<br>(in)   | Pin ID<br>(in) | Make-Up Torque<br>(ft-lbs) | Torsional Yield<br>(ft-lbs) | Pin Tensile Yield<br>(lbs) | Connection Size and Style<br>RSC Type |
|--|----------------|----------------------------|-----------------------------|----------------------------|---------------------------------------|
| Values in green indicate the improved performance of TSDS over API |                |                            |                             |                            |                                       |
| 7  | 3 1/4          | 66,600 + 76%               | 111,000 b + 76%             | 2,000,500 + 13%            | TSDS 55                               |
|  |                | 37,742                     | 62,903 b                    | 1,778,200                  | API 5 1/2 FH                          |
|  | 3 1/2          | 62,910 + 67%               | 104,850 b + 67%             | 1,821,600 + 13%            | TSDS 55                               |
|  |                | 37,742                     | 62,903 b                    | 1,619,200                  | API 5 1/2 FH                          |
|  | 3 3/4          | 58,830 + 56%               | 98,060 b + 56%              | 1,629,400 + 12%            | TSDS 55                               |
|  |                | 37,742                     | 62,903 b                    | 1,448,400                  | API 5 1/2 FH                          |
|  | 4              | 49,490 + 48%               | 82,480 + 48%                | 1,424,000 + 12%            | TSDS 55                               |
|  |                | 33,412                     | 55,687                      | 1,265,800                  | API 5 1/2 FH                          |
| 7 1/8  | 3 1/4          | 71,870 + 69%               | 119,790 b + 69%             | 2,000,500 + 13%            | TSDS 55                               |
|  |                | 42,425                     | 70,708 b                    | 1,778,200                  | API 5 1/2 FH                          |
|  | 3 1/2          | 68,180 + 61%               | 113,640 b + 61%             | 1,821,600 + 13%            | TSDS 55                               |
|  |                | 42,425                     | 70,708 b                    | 1,619,200                  | API 5 1/2 FH                          |
|  | 3 3/4          | 59,700 + 55%               | 99,510 + 55%                | 1,629,400 + 12%            | TSDS 55                               |
|  |                | 38,514                     | 64,189                      | 1,448,400                  | API 5 1/2 FH                          |
|  | 4              | 49,490 + 48%               | 82,480 + 48%                | 1,424,000 + 12%            | TSDS 55                               |
|  |                | 33,412                     | 55,687                      | 1,265,800                  | API 5 1/2 FH                          |
| 7 1/4  | 3 1/4          | 77,280 + 64%               | 128,810 b + 64%             | 2,000,500 + 13%            | TSDS 55                               |
|  |                | 47,230                     | 78,716 b                    | 1,778,200                  | API 5 1/2 FH                          |
|  | 3 1/2          | 69,200 + 60%               | 115,330 + 60%               | 1,821,600 + 13%            | TSDS 55                               |
|  |                | 43,328                     | 72,213                      | 1,619,200                  | API 5 1/2 FH                          |
|  | 3 3/4          | 59,700 + 55%               | 99,510 + 55%                | 1,629,400 + 12%            | TSDS 55                               |
|  |                | 38,514                     | 64,189                      | 1,448,400                  | API 5 1/2 FH                          |
|  | 4              | 49,490 + 48%               | 82,480 + 48%                | 1,424,000 + 12%            | TSDS 55                               |
|  |                | 33,412                     | 55,687                      | 1,265,800                  | API 5 1/2 FH                          |

b - Torsional yield values shown in yellow indicate the connection is box weak in torsion.

TSDS Values based on 135Ksi Material Yield Strength. API FH Values based on 120Ksi Material Yield Strength.

Torsional values are based on using a thread compound with a 1.0 API friction factor.

Pin tensile yield values are based on tensile loading conditions only, and do not include the combined effect of torsional and tensile loading.