

## API 5CT H40

- Production Standard of API 5CT H40
- Specification & Size of API 5CT H40 Tubing
- Specification & Size of API 5CT H40 Casing
- Chemical Composition of API 5CT H40
- Mechanical Properties Tensile Strength and Yield Strength of API 5CT H40



### •Production Standard of API 5CT H40

#### •API 5CT H40

OCTG pipe is an essential component of many oil and gas operations, and API 5CT H40 OCTG pipe is a popular choice for medium-strength applications. API 5CT H40 is a kind of API 5CT steel well casing and tubing. It is mainly used for protecting petroleum well walls. API 5CT H40 steel well casing and tubing can be either welded pipe or seamless pipe. The ends of these products are usually flat end or upset end.

### •Dimensions and Sizes of API 5CT H40 Tubing

| DN    | O.D.  |       | Weight                       |                          | W.T.  |      | End Processing |     |     |     |     |     |      |
|-------|-------|-------|------------------------------|--------------------------|-------|------|----------------|-----|-----|-----|-----|-----|------|
|       |       |       | Non-upset<br>coupling-thread | Upset<br>coupling-thread |       |      | Steel Grade    |     |     |     |     |     |      |
|       | in    | mm    | lb./ft.                      | lb./ft.                  | in    | mm   | H40            | J55 | L80 | N80 | C90 | T95 | P110 |
| 2-3/8 | 2.375 | 60.32 | 4.00                         | —                        | 0.167 | 4.24 | PU             | PN  | PN  | PN  | PN  | PN  | —    |
|       |       |       | 4.60                         | 4.70                     | 0.190 | 4.83 | PNU            | PNU | PNU | PNU | PNU | PNU | PNU  |

|                                                                                 |       |        |       |       |       |       |     |     |     |     |      |     |     |
|---------------------------------------------------------------------------------|-------|--------|-------|-------|-------|-------|-----|-----|-----|-----|------|-----|-----|
|                                                                                 |       |        | 5.80  | 5.95  | 0.254 | 6.45  | —   | —   | PNU | PNU | PNU  | PNU | PNU |
|                                                                                 |       |        | 6.60  | —     | 0.295 | 7.49  | —   | —   | P   | —   | P    | P   | —   |
|                                                                                 |       |        | 7.35  | 7.45  | 0.336 | 8.53  | —   | —   | PU  | —   | PU   | PU  | —   |
| 2-7/8                                                                           | 2.875 | 73.02  | 6.40  | 6.50  | 0.217 | 5.51  | PNU | PNU | —   | —   | —    | —   | —   |
|                                                                                 |       |        | 7.80  | 7.90  | 0.276 | 7.01  | —   | —   | —   | —   | —    | —   | —   |
|                                                                                 |       |        | 8.60  | 8.70  | 0.308 | 7.82  | —   | —   | PLB | PLB | PLBE | —   | PLB |
|                                                                                 |       |        | 9.35  | 9.45  | 0.340 | 8.64  | —   | —   | PLB | PLB | PLBE | —   | PLB |
|                                                                                 |       |        | 10.50 | —     | 0.392 | 9.96  | —   | —   | PLB | PLB | PLB  | —   | PLB |
|                                                                                 |       |        | 11.50 | —     | 0.440 | 11.18 | —   | —   | —   | —   | PLB  | —   |     |
| 3-1/2                                                                           | 3.500 | 88.90  | 7.70  | —     | 0.216 | 5.49  | PN  | PN  | PN  | PN  | PN   | PN  | —   |
|                                                                                 |       |        | 9.20  | 9.30  | 0.254 | 6.45  | PNU | PNU | PNU | PNU | PNU  | PNU | PNU |
|                                                                                 |       |        | 10.20 | —     | 0.289 | 7.34  | PN  | PN  | PN  | PN  | PN   | PN  | —   |
|                                                                                 |       |        | 12.70 | 12.95 | 0.375 | 9.52  | —   | —   | PNU | PNU | PNU  | PNU | PNU |
|                                                                                 |       |        | 14.30 | —     | 0.430 | 10.92 | —   | —   | P   | —   | P    | P   | —   |
|                                                                                 |       |        | 15.50 | —     | 0.476 | 12.09 | —   | —   | P   | —   | P    | P   | —   |
|                                                                                 |       |        | 17.00 | —     | 0.530 | 13.46 | —   | —   | P   | —   | P    | P   | —   |
| 4                                                                               | 4.000 | 101.60 | 9.50  | —     | 0.226 | 5.74  | PN  | PN  | PN  | PN  | PN   | PN  | —   |
|                                                                                 |       |        | —     | 11.00 | 0.262 | 6.65  | PU  | PU  | PU  | PU  | PU   | PU  | —   |
|                                                                                 |       |        | 13.20 | —     | 0.330 | 8.38  | —   | —   | P   | —   | P    | P   | —   |
|                                                                                 |       |        | 16.10 | —     | 0.415 | 10.54 | —   | —   | P   | —   | P    | P   | —   |
|                                                                                 |       |        | 18.90 | —     | 0.500 | 12.70 | —   | —   | P   | —   | P    | P   | —   |
|                                                                                 |       |        | 22.20 | —     | 0.610 | 15.49 | —   | —   | P   | —   | P    | P   | —   |
| 4-1/2                                                                           | 4.500 | 114.30 | 12.60 | 12.75 | 0.271 | 6.88  | PNU | PNU | PNU | PNU | PNU  | PNU | —   |
|                                                                                 |       |        | 15.20 | —     | 0.337 | 8.56  | —   | —   | P   | —   | P    | P   | —   |
|                                                                                 |       |        | 17.00 | —     | 0.380 | 9.65  | —   | —   | P   | —   | P    | P   | —   |
|                                                                                 |       |        | 18.90 | —     | 0.430 | 10.92 | —   | —   | P   | —   | P    | P   | PLB |
|                                                                                 |       |        | 21.50 | —     | 0.500 | 12.70 | —   | —   | P   | —   | P    | P   | PLB |
|                                                                                 |       |        | 23.70 | —     | 0.560 | 14.22 | —   | —   | P   | —   | P    | P   | PLB |
|                                                                                 |       |        | 26.10 | —     | 0.630 | 16.00 | —   | —   | P   | —   | P    | P   | PLB |
| P——Plain; N—— Non-upset coupling-thread; U—— Upset coupling-thread; L——Integral |       |        |       |       |       |       |     |     |     |     |      |     |     |

## •Specification & Size of API 5CT H40 Casing

| DN    | O. D. |       | Weight |       | W. T. |       | End Machining Form |            |     |     |            |      |
|-------|-------|-------|--------|-------|-------|-------|--------------------|------------|-----|-----|------------|------|
|       |       |       |        |       |       |       | Steel Grade        |            |     |     |            |      |
|       | in    | mm    | lb/ft  | kg/m  | in    | mm    | H40                | J55<br>K55 | L80 | N80 | C90<br>T95 | P110 |
| 4-1/2 | 4.500 | 114.3 | 9.50   | 14.14 | 0.205 | 5.21  | PS                 | PS         | —   | —   | —          | —    |
|       |       |       | 10.50  | 15.63 | 0.224 | 5.69  | —                  | PSB        | —   | —   | —          | —    |
|       |       |       | 11.60  | 17.26 | 0.250 | 6.35  | —                  | PSLB       | PLB | PLB | PLB        | PLB  |
|       |       |       | 13.50  | 20.09 | 0.290 | 7.37  | —                  | —          | PLB | PLB | PLB        | PLB  |
|       |       |       | 15.10  | 22.47 | 0.337 | 9.56  | —                  | —          | —   | —   | —          | PLB  |
| 5     | 5.000 | 127   | 11.50  | 17.11 | 0.220 | 5.59  | —                  | PS         | —   | —   | —          | —    |
|       |       |       | 13.00  | 19.35 | 0.253 | 6.43  | —                  | PSLB       | —   | —   | —          | —    |
|       |       |       | 15.00  | 22.32 | 0.296 | 7.52  | —                  | PSLB       | PLB | PLB | PLBE       | PLB  |
|       |       |       | 18.00  | 26.79 | 0.362 | 9.19  | —                  | —          | PLB | PLB | PLBE       | PLB  |
|       |       |       | 21.40  | 31.85 | 0.437 | 11.10 | —                  | —          | PLB | PLB | PLB        | PLB  |
|       |       |       | 23.20  | 34.53 | 0.478 | 12.14 | —                  | —          | —   | —   | PLB        | —    |
|       |       |       | 24.10  | 35.86 | 0.500 | 12.70 | —                  | —          | —   | —   | PLB        | —    |
| 5-1/2 | 5.500 | 139.7 | 14.00  | 20.83 | 0.244 | 6.20  | PS                 | PS         | —   | —   | —          | —    |
|       |       |       | 15.50  | 23.07 | 0.275 | 6.98  | —                  | PSLB       | —   | —   | —          | —    |
|       |       |       | 17.00  | 25.30 | 0.304 | 7.72  | —                  | PSLB       | PLB | PLB | PLBE       | PLB  |
|       |       |       | 20.00  | 29.76 | 0.361 | 9.17  | —                  | —          | PLB | PLB | PLBE       | PLB  |
|       |       |       | 23.00  | 34.23 | 0.415 | 10.54 | —                  | —          | PLB | PLB | PLBE       | PLB  |
|       |       |       | 26.80  | 39.88 | 0.500 | 12.70 | —                  | —          | —   | —   | —          | —    |
|       |       |       | 29.70  | 44.20 | 0.562 | 14.27 | —                  | —          | —   | —   | —          | —    |
|       |       |       | 32.60  | 48.51 | 0.625 | 15.88 | —                  | —          | —   | —   | —          | —    |
|       |       |       | 35.30  | 52.53 | 0.687 | 17.45 | —                  | —          | —   | —   | —          | —    |
|       |       |       | 38.00  | 56.55 | 0.750 | 19.05 | —                  | —          | —   | —   | —          | —    |

|       |       |        |       |       |       |       |    |      |     |     |      |     |
|-------|-------|--------|-------|-------|-------|-------|----|------|-----|-----|------|-----|
|       |       |        | 40.50 | 60.27 | 0.812 | 20.62 | —  | —    | —   | —   | —    | —   |
|       |       |        | 43.10 | 64.14 | 0.875 | 22.22 | —  | —    | —   | —   | —    | —   |
| 6-5/8 | 6.625 | 168.28 | 20.00 | 29.76 | 0.288 | 7.32  | PS | PSLB | —   | —   | —    | —   |
|       |       |        | 24.00 | 35.72 | 0.352 | 8.94  | —  | PSLB | PLB | PLB | PLBE | PLB |
|       |       |        | 28.00 | 41.67 | 0.417 | 10.59 | —  | —    | PLB | PLB | PLBE | PLB |
|       |       |        | 32.00 | 47.62 | 0.475 | 12.06 | —  | —    | PLB | PLB | PLBE | PLB |
| 7     | 7.000 | 177.8  | 17.00 | 25.30 | 0.231 | 5.87  | PS | —    | —   | —   | —    | —   |
|       |       |        | 20.00 | 29.76 | 0.272 | 6.91  | PS | PS   | —   | —   | —    | —   |
|       |       |        | 23.00 | 34.23 | 0.317 | 8.05  | —  | PSLB | PLB | PLB | PLBE | —   |
|       |       |        | 26.00 | 38.69 | 0.362 | 9.19  | —  | PSLB | PLB | PLB | PLBE | PLB |
|       |       |        | 29.00 | 43.16 | 0.408 | 10.36 | —  | —    | PLB | PLB | PLBE | PLB |
|       |       |        | 32.00 | 47.62 | 0.453 | 11.51 | —  | —    | PLB | PLB | PLBE | PLB |
|       |       |        | 35.00 | 52.09 | 0.498 | 12.65 | —  | —    | PLB | PLB | PLBE | PLB |
|       |       |        | 38.00 | 56.55 | 0.540 | 13.72 | —  | —    | PLB | PLB | PLBE | PLB |
|       |       |        | 42.70 | 63.54 | 0.625 | 15.88 | —  | —    | —   | —   | —    | —   |
|       |       |        | 46.40 | 69.05 | 0.687 | 17.45 | —  | —    | —   | —   | —    | —   |
|       |       |        | 50.10 | 74.56 | 0.750 | 19.05 | —  | —    | —   | —   | —    | —   |
|       |       |        | 53.60 | 79.77 | 0.812 | 20.62 | —  | —    | —   | —   | —    | —   |
| 7-5/8 | 7.625 | 193.68 | 24.00 | 35.72 | 0.300 | 7.62  | PS | —    | —   | —   | —    | —   |
|       |       |        | 26.40 | 39.29 | 0.328 | 8.33  | —  | PSLB | PLB | PLB | PLBE | PLB |
|       |       |        | 29.70 | 44.20 | 0.375 | 9.52  | —  | —    | PLB | PLB | PLBE | PLB |
|       |       |        | 33.70 | 50.15 | 0.430 | 10.92 | —  | —    | PLB | PLB | PLBE | PLB |
|       |       |        | 39.00 | 58.05 | 0.500 | 12.70 | —  | —    | PLB | PLB | PLBE | PLB |
|       |       |        | 42.80 | 63.69 | 0.562 | 14.27 | —  | —    | PLB | PLB | PLB  | PLB |
|       |       |        | 45.30 | 67.41 | 0.595 | 15.11 | —  | —    | PLB | PLB | PLB  | PLB |
|       |       |        | 47.10 | 70.09 | 0.625 | 15.88 | —  | —    | PLB | PLB | PLB  | PLB |
|       |       |        | 51.20 | 76.19 | 0.687 | 17.45 | —  | —    | —   | —   | —    | —   |
|       |       |        | 55.30 | 80.30 | 0.750 | 19.05 | —  | —    | —   | —   | —    | —   |
| 8-5/8 | 8.625 | 219.08 | 24.00 | 35.72 | 0.264 | 6.71  | —  | PS   | —   | —   | —    | —   |
|       |       |        | 28.00 | 41.62 | 0.304 | 7.72  | PS | —    | —   | —   | —    | —   |
|       |       |        | 32.00 | 47.62 | 0.352 | 8.94  | PS | PSLB | —   | —   | —    | —   |
|       |       |        | 36.00 | 53.57 | 0.400 | 10.16 | —  | PSLB | PLB | PLB | PLBE | PLB |

|        |        |        |       |        |       |       |    |      |     |     |      |     |
|--------|--------|--------|-------|--------|-------|-------|----|------|-----|-----|------|-----|
|        |        |        | 40.00 | 59.53  | 0.450 | 11.43 | —  | —    | PLB | PLB | PLBE | PLB |
|        |        |        | 44.00 | 65.48  | 0.500 | 12.70 | —  | —    | PLB | PLB | PLBE | PLB |
|        |        |        | 49.00 | 72.92  | 0.557 | 14.15 | —  | —    | PLB | PLB | PLBE | PLB |
| 9-5/8  | 9.625  | 244.48 | 32.30 | 48.07  | 0.312 | 7.92  | PS | —    | —   | —   | —    | —   |
|        |        |        | 36.00 | 53.57  | 0.352 | 8.94  | PS | PSLB | —   | —   | —    | —   |
|        |        |        | 40.00 | 59.53  | 0.395 | 10.03 | —  | PSLB | PLB | PLB | PLBE | —   |
|        |        |        | 43.50 | 64.73  | 0.435 | 11.05 | —  | —    | PLB | PLB | PLBE | PLB |
|        |        |        | 47.00 | 69.94  | 0.472 | 11.99 | —  | —    | PLB | PLB | PLBE | PLB |
|        |        |        | 53.50 | 79.62  | 0.545 | 13.84 | —  | —    | PLB | PLB | PLBE | PLB |
|        |        |        | 58.40 | 86.91  | 0.595 | 15.11 | —  | —    | PLB | PLB | PLB  | PLB |
|        |        |        | 59.40 | 88.40  | 0.609 | 15.47 | —  | —    | —   | —   | —    | —   |
|        |        |        | 64.90 | 96.58  | 0.672 | 17.07 | —  | —    | —   | —   | —    | —   |
|        |        |        | 70.30 | 104.62 | 0.734 | 18.64 | —  | —    | —   | —   | —    | —   |
|        |        |        | 75.60 | 112.50 | 0.797 | 20.24 | —  | —    | —   | —   | —    | —   |
| 10-3/4 | 10.750 | 273.05 | 32.75 | 48.74  | 0.279 | 7.09  | PS | —    | —   | —   | —    | —   |
|        |        |        | 40.50 | 60.27  | 0.350 | 8.89  | PS | PSB  | —   | —   | —    | —   |
|        |        |        | 15.50 | 67.71  | 0.400 | 10.16 | —  | PSB  | —   | —   | —    | —   |
|        |        |        | 51.00 | 75.90  | 0.450 | 11.43 | —  | PSB  | PSB | PSB | PSBE | PSB |
|        |        |        | 55.50 | 82.59  | 0.495 | 12.57 | —  | —    | PSB | PSB | PSBE | PSB |
|        |        |        | 60.70 | 90.33  | 0.545 | 13.84 | —  | —    | —   | —   | PSBE | PSB |
|        |        |        | 65.70 | 97.77  | 0.595 | 15.11 | —  | —    | —   | —   | PSB  | PSB |
|        |        |        | 73.20 | 108.93 | 0.672 | 17.07 | —  | —    | —   | —   | —    | —   |
|        |        |        | 79.20 | 117.86 | 0.734 | 18.64 | —  | —    | —   | —   | —    | —   |
|        |        |        | 85.30 | 126.94 | 0.797 | 20.24 | —  | —    | —   | —   | —    | —   |
|        |        |        |       |        |       |       |    |      |     |     |      |     |
| 11-3/4 | 11.750 |        | 42.00 | 62.50  | 0.333 | 8.46  | PS | —    | —   | —   | —    | —   |
|        |        |        | 47.00 | 69.94  | 0.375 | 20.24 | —  | —    | —   | —   | —    | —   |
|        |        |        | 54.00 | 80.36  | 0.435 | 8.46  | —  | —    | —   | —   | —    | —   |
|        |        |        | 60.00 | 89.29  | 0.489 | 9.53  | —  | —    | —   | —   | —    | —   |
|        |        |        | 65.00 | 96.73  | 0.534 | 11.05 | —  | —    | —   | —   | —    | —   |
|        |        |        | 71.00 | 105.66 | 0.582 | 14.42 | —  | —    | —   | —   | —    | —   |
| 13-3/8 | 13.375 | 339.73 | 48.00 | 71.43  | 0.330 | 8.38  | PS | —    | —   | —   | —    | —   |
|        |        |        | 54.50 | 81.10  | 0.380 | 9.65  | —  | PSB  | —   | —   | —    | —   |
|        |        |        | 61.00 | 90.78  | 0.430 | 10.92 | —  | PSB  | —   | —   | —    | —   |

|        |        |        |        |        |       |       |     |      |     |     |     |     |
|--------|--------|--------|--------|--------|-------|-------|-----|------|-----|-----|-----|-----|
|        |        |        | 68.00  | 101.19 | 0.480 | 12.19 | —   | PSB  | PSB | PSB | PSB | PSB |
|        |        |        | 72.00  | 107.15 | 0.514 | 13.06 | —   | —    | PSB | PSB | PSB | PSB |
| 16     | 16.000 | 406.4  | 65.00  | 96.73  | 0.375 | 9.53  | PS  | —    | —   | —   | —   | —   |
|        |        |        | 75.00  | 111.61 | 0.438 | 11.13 | —   | PSB  | —   | —   | —   | —   |
|        |        |        | 84.00  | 125.01 | 0.495 | 12.57 | —   | PSB  | —   | —   | —   | —   |
|        |        |        | 109.00 | 162.21 | 0.656 | 16.66 | —   | P    | P   | P   | —   | P   |
| 18-5/8 | 18.625 | 473.08 | 87.50  | 130.21 | 0.435 | 11.05 | PS  | PSB  | —   | —   | —   | —   |
| 20     | 20.000 | 508    | 94.00  | 139.89 | 0.438 | 11.13 | PSL | PSLB | —   | —   | —   | —   |
|        |        |        | 106.50 | 158.49 | 0.500 | 12.70 | —   | PSLB | —   | —   | —   | —   |
|        |        |        | 133.00 | 197.93 | 0.635 | 16.13 | —   | PSLB | —   | —   | —   | —   |

P——Plain; S——Short-thread; L——Long-thread; B——Buttress thread; E——Extreme thread

## ●Chemical Composition of API 5CT H40

| Grade | Type | C |   | Mn |   | Mo |   | Cr |   | Ni<br>max. | Cu<br>max. | P<br>max. | S<br>max. | Si<br>max. |
|-------|------|---|---|----|---|----|---|----|---|------------|------------|-----------|-----------|------------|
| H40   | —    | — | — | —  | — | —  | — | —  | — | —          | —          | 0.03      | 0.03      | —          |

## ●Mechanical Properties Tensile Strength and Yield Strength of API 5CT H40

| API 5CT Casing<br>Pipe Type | API 5CT Casing Pipe<br>Tensile Strength | API 5CT Casing Pipe Yield<br>Strength | API 5CT Casing Pipe<br>Hardness |
|-----------------------------|-----------------------------------------|---------------------------------------|---------------------------------|
| —                           | ≥414                                    | 379 ~ 552                             | —                               |