TABLE 2—FORMULAS FOR BASIC DIMENSIONS

| Term | Symbol | Formula | | | | |
|---|---|---|---|---|---|---|
| | | 30 deg $_D$ | | | 37.5 deg $_D$ | 45 deg $_D$ |
| | | Flat Root Side Fit | Flat Root Major Dia Fit | Fillet Root Side Fit | Fillet Root Side Fit | Fillet Root Side Fit |
| | | 2.5/5 thru 32/64 Spline Pitch | 3/6 thru 16/32 Spline Pitch | 2.5/5 thru 48/96 Spline Pitch | 2.5/5 thru 48/96 Spline Pitch | 10/20 thru 128/256 Spline Pitch |
| Stub Pitch | $P_s$ | $2P$ | $2P$ | $2P$ | $2P$ | $2P$ |
| Pitch Diameter | $D$ | $\frac{N}{P}$ | $\frac{N}{P}$ | $\frac{N}{P}$ | $\frac{N}{P}$ | $\frac{N}{P}$ |
| Base Diameter | $D_b$ | $D \cos \phi_D$ | $D \cos \phi_D$ | $D \cos \phi_D$ | $D \cos \phi_D$ | $D \cos \phi_D$ |
| Circular Pitch | $p$ | $\frac{\pi}{P}$ | $\frac{\pi}{P}$ | $\frac{\pi}{P}$ | $\frac{\pi}{P}$ | $\frac{\pi}{P}$ |
| Minimum Effective Space Width | $s_v$ | $\frac{\pi}{2P}$ | $\frac{\pi}{2P}$ | $\frac{\pi}{2P}$ | $\frac{0.5\pi + 0.1}{P}$ | $\frac{0.5\pi + 0.2}{P}$ |
| Major Diameter, Internal | $D_{ri}$ | $\frac{N + 1.35}{P}$ | $\frac{N + 1}{P}$ | $\frac{N + 1.8}{P}$ | $\frac{N + 1.6}{P}$ | $\frac{N + 1.4}{P}$ |
| Major Diameter, External | $D_o$ | $\frac{N + 1}{P}$ | $\frac{N + 1}{P}$ | $\frac{N + 1}{P}$ | $\frac{N + 1}{P}$ | $\frac{N + 1}{P}$ |
| Minor Diameter, Internal | $D_i$ | $\frac{N - 1}{P}$ | $\frac{N - 1}{P}$ | $\frac{N - 1}{P}$ | $\frac{N - 0.8}{P}$ | $\frac{N - 0.6}{P}$ |
| Minor Diameter, External — 2.5/5 thru 12/24 spline pitch | $D_{ro}$ | $\frac{N - 1.35}{P}$ | | $\frac{N - 1.8}{P}$ | $\frac{N - 1.3}{P}$ | |
| Minor Diameter, External — 16/32 spline pitch, and finer | $D_{ro}$ | $\frac{N - 1.35}{P}$ | | $\frac{N - 2}{P}$ | $\frac{N - 1.3}{P}$ | |
| Minor Diameter, External — 10/20 spline pitch, and finer | $D_{ro}$ | | | | | $\frac{N - 1}{P}$ |
| Form Diameter, Internal | $D_{Fi}$ | $\frac{N + 1}{P} + 2c_F$ | $\frac{N + 0.8}{P} - 0.004 + 2c_F$ | $\frac{N + 1}{P} + 2c_F$ | $\frac{N + 1}{P} + 2c_F$ | $\frac{N + 1}{P} + 2c_F$ |
| Form Diameter, External | $D_{Fo}$ | $\frac{N - 1}{P} - 2c_F$ | $\frac{N - 1}{P} - 2c_F$ | $\frac{N - 1}{P} - 2c_F$ | $\frac{N - 0.8}{P} - 2c_F$ | $\frac{N - 0.6}{P} - 2c_F$ |
| Form Clearance (Radial) | $c_F$ | 0.001D, with max of 0.010, min of 0.002 | | | | |

$\pi$ = 3.1415927.

## 30 DEG PRESSURE ANGLE

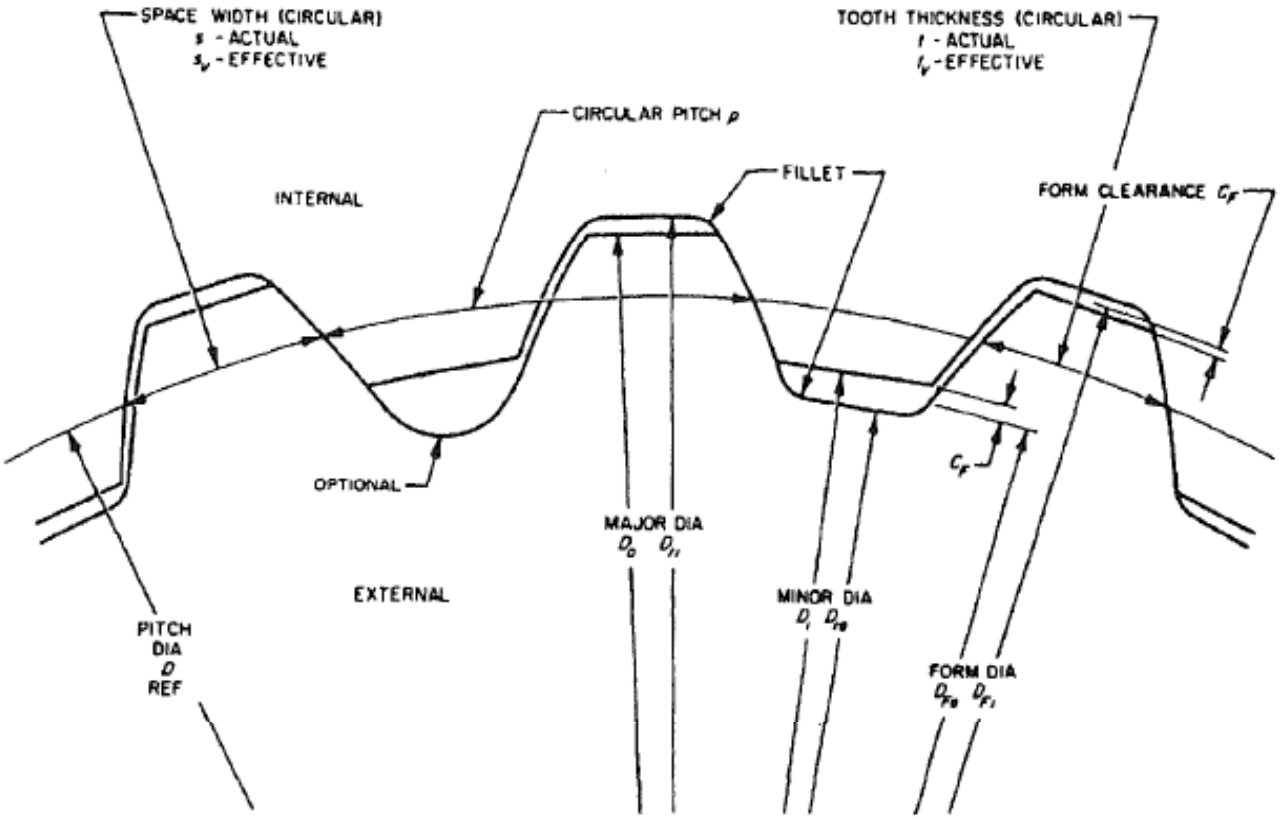


FIG. 5–SPLINE TERMS, SYMBOLS AND DRAWING DATA, 30 DEG PRESSURE ANGLE, FLAT ROOT SIDE FI