



PENETRATOR

SPEED AND FEED RATE TABLE

In a **RECENT** development, aimed specifically at the **STRUCTURAL STEEL** market, the efficient and durable **OCEAN PENETRATOR** has undergone two significant changes.....

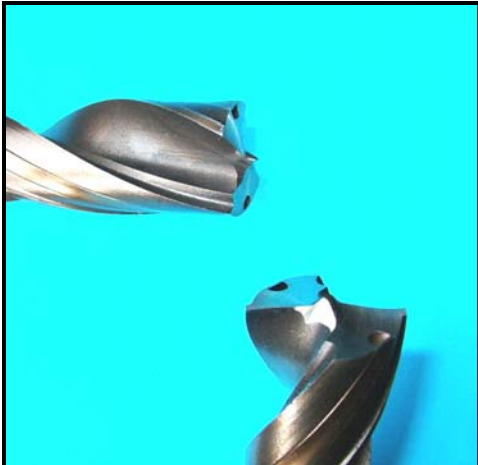
- **DRILL MATERIAL** has changed from **HSS M2** steel to **HSSCo M35 COBALT** steel
- **FACTORY GROUND POINT ANGLE** has changed from the current multi-purpose **STANDARD 130°** point angle to a **170° STRUCTURAL STEEL** point angle.

These changes to the **PENETRATOR** drills have had the following **IMPROVED** benefits: -

- Increased **CUTTING EDGE** life - compared to standard **HSS**
- Negligible **"AFTER HOLE"** grinding due to the formation of the **"CONE SHAPED"** cap that pops off after the drill has penetrated and completed the hole

Of course, the drills can also be supplied with the current multi-purpose **STANDARD 130°** point angle to suit the multi-application use that the **PENETRATOR** has.

SPEEDS AND FEEDS for holes up to 2" depth in TYPICAL STRUCTURAL STEEL

The New Ocean Penetrator Cobalt Drill Bit with 170° drill point angle	STANDARD DRILL SIZES		RPM		FEED RATE	
	Fractional Size	Decimal Equiv.	From	To	in/rev	mm/rev
	7/16	0.4375	710	1050	0.012	0.30
	1/2	0.5	611	840	0.013	0.33
	9/16	0.5625	590	810	0.014	0.36
	5/8	0.625	562	773	0.015	0.38
	11/16	0.6875	480	670	0.016	0.41
	3/4	0.75	469	644	0.017	0.43
	13/16	0.8125	410	560	0.018	0.46
	7/8	0.875	370	510	0.019	0.48
	15/16	0.9375	350	480	0.02	0.51
	1	1	320	440	0.021	0.53
	1.1/16	1.0625	300	420	0.022	0.56
	1.1/8	1.125	280	400	0.023	0.58
	1.3/16	1.1875	270	380	0.024	0.61
	1.1/4	1.25	260	360	0.024	0.61
	1.5/16	1.3125	250	350	0.026	0.66
	1.3/8	1.375	222	306	0.027	0.69
	1.7/16	1.4375	213	292	0.028	0.71
	1.1/2	1.5	204	280	0.03	0.76
	1.9/16	1.5625	196	269	0.032	0.81
	1.5/8	1.625	188	259	0.033	0.84
	1.11/16	1.6875	180	248	0.034	0.86
	1.3/4	1.75	175	240	0.036	0.91
	1.13/16	1.8125	168	230	0.037	0.94
	1.7/8	1.875	160	222	0.038	0.97
	1.15/16	1.9375	156	216	0.039	0.99
	2	2	150	210	0.04	1.02

The Drill RPM's shown in the table are for drilling depths up to 2" and must be considered as a "Starting Point" as individual drilling machines and conditions are always subject to change.

To optimize the drilling operation, it is recommended that you vary the RPM and not the FEED RATE.