

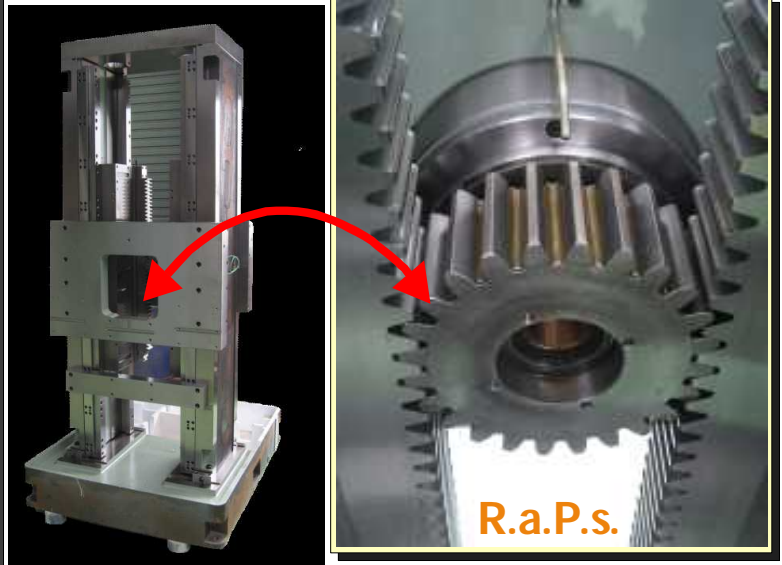
R.a.P.s. The Rack and Pinion Sliders Synchronizing System



We have adopted R.a.P.s. in our all counter flow rolling machine series. Because of our continuous effort and innovation, it is possible for us to get longer durability and high process accuracy.

Advantages of R.a.P.s.

1. Stable repeatability and accuracy.
2. Less distortion and less thermal expansion and degradation after continuous processing.
3. High reproducibility to home position on both ways (forward and backward).
4. Easy maintenance/ adjustment.
5. The structure of R.a.P.s. can avoid direct process load. Therefore, it can maintain stable accuracy in high process load and high speed processing.
6. The difference of drive system such as a hydraulic motor and a servomotor does not affect process accuracy.



Picture 1

It is important to synchronize left and right sliders/dies for precise accuracy.

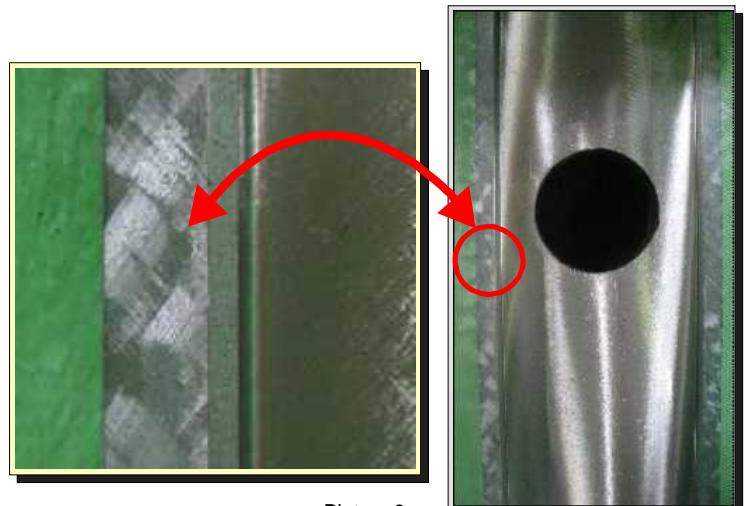
In our rolling machine series we have adopted “2 Rack gears and 1 pinion gear” since we developed the machine. (See Picture 1)

Sliders finish process

We add hand scraping on slides to meet high accuracy, high rigidity, long service life, and high productivity. Because of the below “Advantages of scraping” we can get high reliability on our machines. (See Picture 2)

Advantages of hand scraping

1. Improving accuracy on slide surface.
2. Enhancing more smooth movement.
3. Improving lubrication on slide surface.

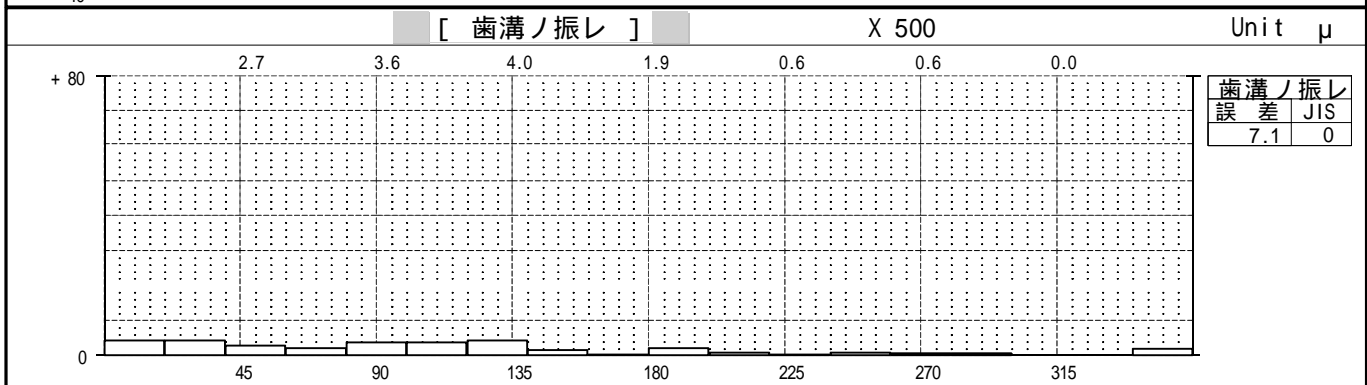
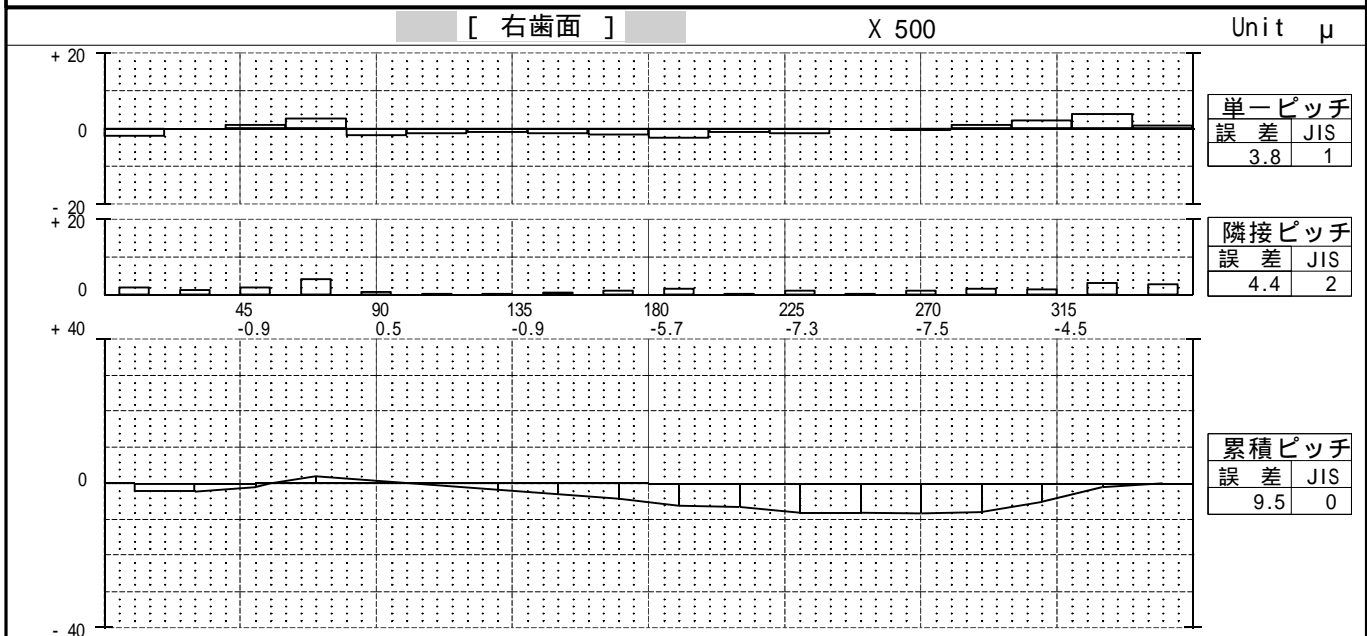
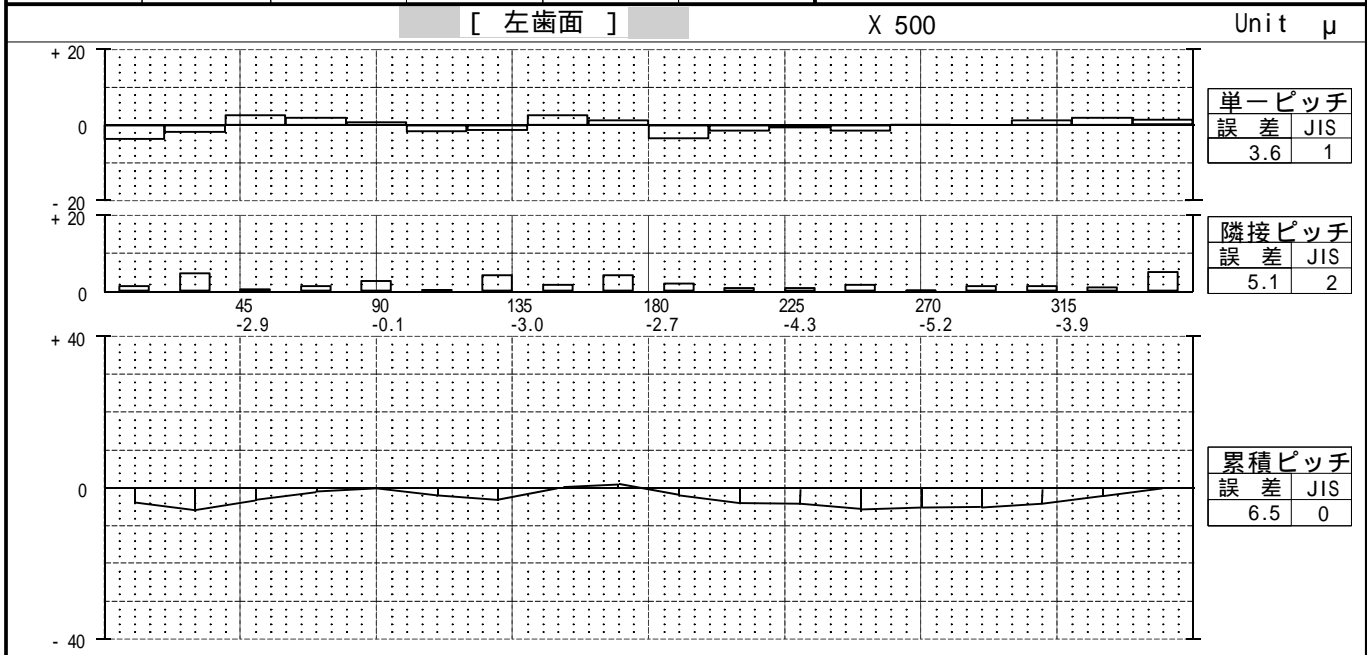


Picture 2



ピッチ・歯溝振レ 検査成績表

歯車番号	k0600550d				連続番号	測定日時	承認	確認	測定
型式名称	pi23.95xz18xm1.25xpa30				1	2008/10/07 20:02			
モジュール 歯数 圧力角 ネジレ角 外歯/内歯 外径	L	R	転位係数 歯幅 基準歯面 測定子 基礎円径 ピッチ円径	L	R	管理コード			
	M 1.25000	M 1.25000		0.0000	0.0000	031010			
	18		21.000	21.000	備考				
	30/00/00	30/00/00	左上						
	L 00/00/00	L 00/00/00		1.250	25.000				
				19.4856	19.4856				
	24.0000			22.5000	22.5000				



*Process condition

Machine type: CT-600 (Hydraulic motor type)
 Parts: Drive shaft both ends spline/ two ways rolling
 Parts s material: 40Cr
 Process speed: 20m/min.
 Clamp: NC + Air pressure
 Coolant: Oil-based

エヌ.エッチ.ケー.ビルダー株式会社

**Measuring method

Gauge: CNC Gear gauge TTI-300E (Tokyo Technical Instruments Inc.)

Note) The above data is one of the examples. It doesn't mean figures stand for process guarantee.