

## PRECISION



### FLEXIBILITY

CUSTOMER SATISFACTION THROUGH
PRECISION PRODUCTS & FLEXIBLE SERVICES

### PT. BINA NIAGA MULTIUSAHA (BNM)

WE COMBINES TWO (2) KEY ELEMENTS IN OUR BUSINESS PROCESS: PRECISION & FLEXIBILITY. PRECISION SYMBOLIZES OPERATIONAL EXCELLENCE AND FLEXIBILITY BRINGS INTANGIBLE ADDED VALUE TO OUR CUSTOMERS. THIS IS THE UNIQUENESS & DISTINCTION THAT POSITIVELY DIFFERENTIATE BNM FROM OTHER MILLS. THE COMBINATION OF PRECISION IN PRODUCTION AND FLEXIBILITY IN SERVICE IS BNM'S PHILOSOPHY.



PRECISION IS MORE THAN ACCURACY AND ATTENTION TO DETAIL. IT IS BEYOND THAT, IT IS ABOUT CARE, PASSION, AND APPRECIATION OF EACH CUSTOMER NEED OF PRODUCT SPECIFICATIONS. EACH PRODUCT SPECIFICATION IS RIGOROUSLY STUDIED & CONFIDENTLY PRODUCED THROUGH STATE OF THE ART EQUIPMENTS AND MACHINERIES. SUCH STATE OF PHILOSOPHY ENABLES US TO CONSISTENTLY DELIVER HIGH QUALITY PRODUCTS TO EACH CUSTOMER.

FLEXIBITY IS ALL ABOUT LISTENING, UNDERSTANDING AND DELIVERING EACH CUSTOMER'S UNIQUE NEEDS. WE REALIZE THAT EVERY CUSTOMER HAS HER OWN PRODUCT STANDARDS THAT ARE DISTINCT TO OTHERS, AND WE ARE COMMITTED TO SATISFY EACH OF THOSE UNIQUE REQUIREMENTS. OUR ABILITY TO DELIVER FLEXIBLE SERVICES, RANGING FROM CUSTOMIZED PRODUCT SPECIFICATIONS TO CUSTOMIZED ORDER QUANTITY, REFLECTS OUR COMMITMENT AND PASSION TO EXCEL IN CUSTOMER SATISFACTION.





LOCATED IN THE PRESTIGIOUS JABABEKA INDUSTRIAL ESTATE PHASE TWO, CIKARANG, INDONESIA, OUR STAINLESS STEEL ROLLING MILL WAS BUILD ON AN AREA OF 15,000 M<sup>2</sup>. SINCE OUR ESTABLISHMENT IN 1996, PT BINA NIAGA MULTIUSAHA (BNM) HAS CONTRIBUTED IN DEVELOPING ELECTRONIC, CHEMICAL, AUTOMOTIVE, AND MEDICAL INSTRUMENT INDUSTRIES.



CURRENTLY, BNM'S PRODUCTION CAPACITY OF 6,000 MT PER YEAR IS SUPPORTING MULTINATIONAL CUSTOMERS SUCH AS TOYOTA, HONDA, SUZUKI, SAMSUNG, NOKIA, LG, TOSHIBA, FUJITSU, ETC. WITH 150 EXPERTS IN THEIR RESPECTIVE FIELDS, WE DELIVER PRECISION STAINLESS STEEL PRODUCTS AROUND THE WORLD.





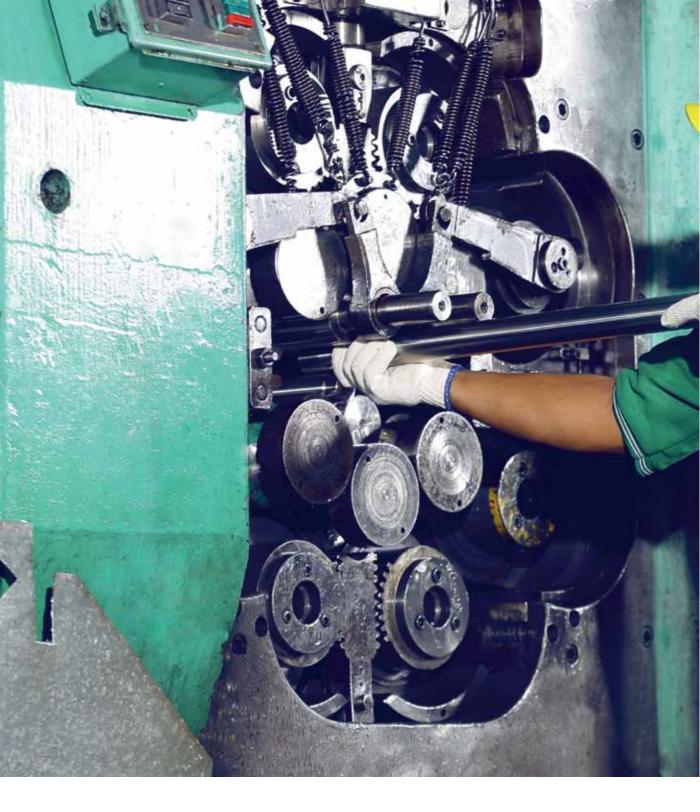
OUR PRODUCT IS A PRECISION COLD-ROLLED STAINLESS STEEL WITH STRINGENT ACCURACY IN SIZE DIMENSION, MECHANICAL PROPERTIES AND SURFACE FINISH. IT IS HIGHLY CUSTOMIZABLE DEPENDING ON EACH CUSTOMER'S REQUIREMENT.





### **GRINDING**

PERFECT QUALITY FROM THE BEGINNING TO THE END OF A
PRODUCTION PROCESS IS THE NORM IN THE STAINLESS STEEL MILLS.
KEEPING THAT IN MIND, WE HAVE THE LATEST CNC ROLL-GRINDING
MACHINE TO SUPPLY PERFECTLY GROUND ROLLS WITH PRECISE
TOLERANCE OF MAXIMUM 3 MICRONS FROM END TO END, AS WELL
AS ACCURATE ROLL ROUGHNESS RANGING FROM 0.05 RA TO 0.40 RA.





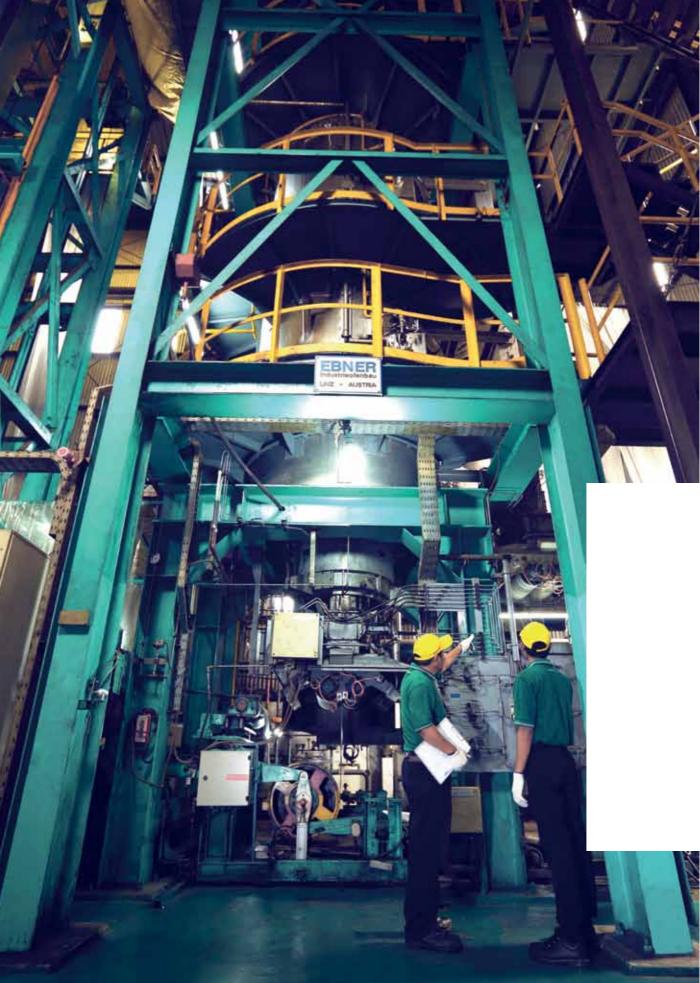




### **DEGREASING LINE**

IT PERFECTLY REMOVES THE OIL RESIDUE CARRIED BY THE STRIP FROM COLD ROLLING MILL BY THE ACTION OF ALKALINE AND HOT RINSING, BEFORE THE COILS ARE SEND TO BRIGHT ANNEALING OR SLITTING.





### **VERTICAL BRIGHT ANNEALING LINE**

A VERTICAL BRIGHT ANNEALING LINE MANUFACTURED BY EBNER - AUSTRIA IS DESIGNED WITH THE PROVEN MUFFLE CONCEPT TO MAKE USE OF THE PURE HYDROGEN ATMOSPHERE WITH LOWEST DEWPOINT (-60 °C) TO MAINTAIN AN OXIDATION-FREE PROCESS. THE RESULT IS A CLEAN, DAMAGE-FREE SURFACE AS WELL AS PERFECT MECHANICAL VALUES IN THE ANNEALED STRIPS. EBNER TECHNOLOGY CAN PROCESS STRIP WITH A VERY HIGH WIDTH TO THICKNESS RATIO. THE STRIP DIMENSIONS TO BE PROCESSED AT THIS FACILITY ARE BETWEEN 1 MM AND 0.1 MM THICKNESS AND UP TO 500 MM WIDTH WITH TEMPERATURES RANGING UP TO 1150 °C.



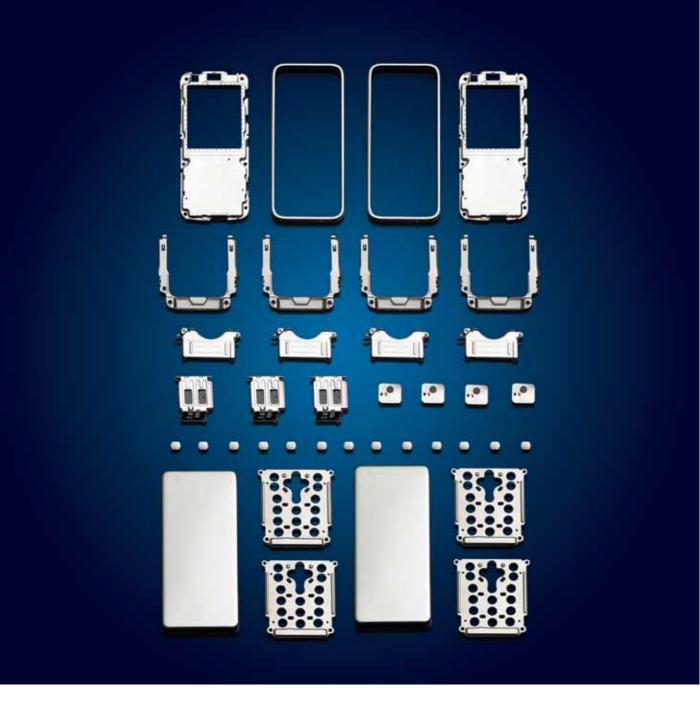


THE SKIN PASS MILL IMPROVES MECHANICAL PROPERTIES, FLATNESS AND BRIGHTNESS OF THE STAINLESS STEEL STRIP. THE MAXIMUM WIDTH IS 500 MM WITH THICKNESS RANGE OF 1.00 MM TO 0.10 MM, AND MAXIMUM BRIGHTNESS OF SOFT PRODUCTS IS BETWEEN 500 – 600 GU.



### **SLITTING LINE**

IT PRECISELY CONTROL THE STRIP WIDTH & BURR LEVEL BY METICULOUSLY SETTING THE PRECISION CIRCULAR SLITTING KNIVES & SPACERS ON THE ARBOR. THE MINIMUM SLIT WIDTH CAN BE AS NARROW AS 5 MM.



### **HANDPHONE PARTS**

SIM CARD HOLDER OUTER CASING INNER CASING KEYPAD



### **ELECTRICAL/ELECTRONIC PARTS**

LITHIUM MERCURY CELLS
COMPUTER HARD DISC DRIVE
DVD & VCD PLAYER PART
TELEVISION PART
PAPER CUTTER
BATTERY HOLDER
BLENDER KNIVE



### **AUTOMOTIVE/VEHICLE PARTS**

ENGINE GASKET
BRAKE SYSTEM
WINDOW CAR RIMMING
COVER MAGNET
PISTON RING
TRANSMISSION SPRING



### **INDUSTRIAL PARTS**

GAS PIPE BANDING
TOWER PACKING
CABLE TIE
FLEXIBLE HOSE
CORRUGATED FLEXIBLE
SPIRALLY WOUND TUBE
COIL SPRING



### **MEDICAL INSTRUMENTS**

NEEDLE SYRINGE LABORATORY DEVICE



IN ORDER TO DELIVER THE ASSURED QUALITY, ALL MATERIAL FROM RAW MATERIAL UNTIL FINISHED GOODS ARE INSPECTED & TESTED BEFORE DELIVERED TO CUSTOMER. TO ENSURE THE COMPLIANCE WITH CUSTOMER'S REQUIREMENT BNM HAS A QUALITY CONTROL LABORATORY, WHICH IS EQUIPPED WITH MODERN TESTING.

- HARDNESS TEST MACHINE
- YIELD AND TENSILE STRENGTH MACHINE
- BRIGHTNESS AND ROUGHNESS TESTING MACHINE



GETTING THE PRODUCT SAFELY TO CUSTOMER IS AS IMPORTANT AS MAKING THE QUALITY PRODUCT. WHICH IS WHY BNM HAS IMPLEMENTED SEVERAL PACKAGING MODELS TO ENSURE NO DAMAGE OCCURS TO THE COILS.



# **TECHNICAL INFORMATION**

	IS INDIA	AISI USA	DIN GERMANY	AFNOR FRANCE	JAPAN	BS BRITIAN	SIS	NNS	UNI
SS 301	X10 Cr 17Ni 7	301	1.4310	Z 12 CN 17-08	SUS 301	301 S 21	142331	\$ 30100	X12 Cr Ni 1707
SS 304	X02 Cr 19 Ni 10	304	1.4301	Z 6 CN 18-19	SUS 304	304 S 15	142333	S 30400	X5 Cr Ni 1810
SS 304L		304L	1.4306	Z 2 CN 18-10	SUS 304 L	304 S 11	142352	S 30303	X2 Cr Ni 1811
SS 310S		3105	1.4845		SUS 310 S		142361	\$ 31008	X6 Cr Ni 2520
SS 316	X04 Cr 17 Ni 12 Mo 2	316	1.4401	Z 6 CND 17-11	SUS 316	316 S 31	142347	S 31600	X8 Cr Ni Mo 1713
SS 316L	X02 Cr 17 Ni 12 Mo 2	316L	1.4404	Z 2 CND 17-12	SUS 316 L	316 S 31	142338	S 31603	X2 Cr Ni Mo 1712
SS 321	X04 Cr 18 Ni 10 Ti 20	321	1.4878	Z 6 CNT 18-12	SUS 321	321 S 31	142337	S 32100	X6 Cr Ni Ti1811
SS 409		409	1.4521	Z 5 CT 12	SUS 409	409 S 17		S 40900	
SS 410S		4105							
SS 430	X10 Cr 17	430	1.4016	Z8C17	SUS 430	430 S 17	142320	S 43000	X12 Cr 17C
SS 409M		,				HYFAB 3/12			

**EQUIVALENT SPECIFICATIONS:** 

STAINLESS STEELS

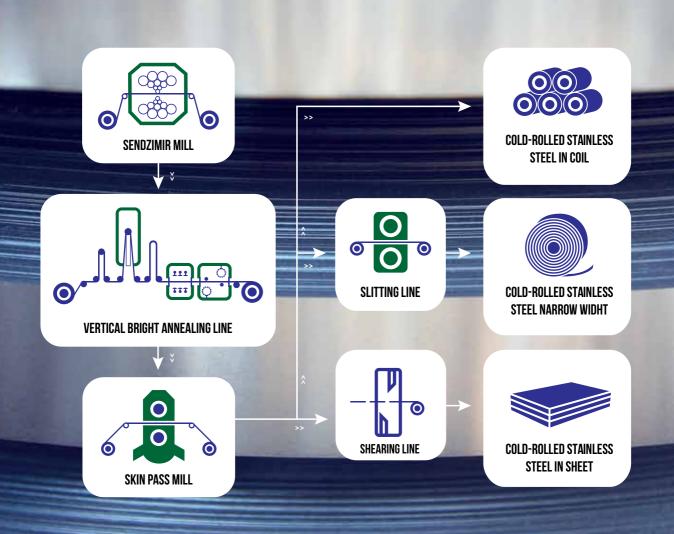
GRADE	C (Max)	<b>GRADE</b> C (Max) Si (Max)	Mn	ť	Ē	P (Max)	P (Max) S (Max) N (Max)	N (Max)	Other Elements
301	0.15	1.00	2.00 max	16.00 - 18.00	9.00 - 8.00	0.045	0:030	0.1	
301L	0.03	1.00	2.00 max	16.00 - 18.00	900 - 8.00	0.045	0.030	0.2	
304	0.07	0.70	2.00 max	17.5 - 19.5	8.00 - 10.50	0.045	0.030	0.1	
304L	0.03	0.75	2.00 max	17.5 - 19.5	8.00 - 12.00	0.045	0.030	0.1	
3105	80.0	1.50	2.00 max	24.00 - 26.00	19.00 - 22.0	0.045	0.030		
316	80.0	0.75	2.00 max	16.00 - 18.00	10.00 - 14.00	0.045	0:030	0.1	Mo 2.0-3.0
316L	0.03	0.75	2.00 max	16.00 - 18.00	10.00 - 14.00	0.045	0:030	0.1	Mo 2.0-3.0
321	80.0	0.75	2.00 max	17.00 - 19.00	9.00 - 12.00	0.045	0:030	0.1	Ti=5X(C+N) Min/0.70 max
SSLNO	0.12	0.75	10.5 max	14.5 - 15.5	0.30 - 1.00	0.075	0.015	0.20	Cu 2.0 max
SSLN1	0.12	0.75	10.0 max	14.00 - 16.00	0.90 - 1.70	0.075	0.030	0.20	Cu 2.2 max
SSLN4	0.1	0.75	8.0 max	14.00 - 17.00	3.80 - 4.70	0.070	0:030	0.15	Cu 2.2 max
204Cu	0.15	1.00	6.50-9.00	15.5 - 17.5	1.5 - 3.5	090.0	0.030	0.25	Cu 2.0-4.0
409	0.03	1.00	1.00 max	10.50 - 11.70	0.50 max	0.04	0.02	0.03	Ti=6x(C+N) Min/0.50 max Nb 0.17 ma x
SS 409M	0.03	1.00	0.5-1.5	10.80 - 12.50	1.5 max	0.040	0.030	0.03	
4105	0.08	1.00	1.00 max	11.50 - 13.50	0.6 max	0.040	0.030		
420	0.15	1.00	1.00 max	12.00 - 14.00	0.75 max	0.040	0.030		Mo 0.5 max
430	0.12	1.00	1.00 max	16.00 - 18.00	0.75 max	0.040	0.030		
439	0.03	1.00	1.00 max	17.00 - 19.00	0.5 max	0.040	0:030	0.03	Ti(0.2+4 (C+N) Min /1.1 max AI 0.15 ma

# STANDARD GRADES & CHEMICAL COMPOSITION % CHEMICAL COMPOSITION (LADLE)

To ensure our product quality always consistent with the international standard, we utilize the latest technological breakthrough machinery SCRM 20 High Sendzimir Mill, Vertical Bright Annealing Line, Skin Pass Mill and Slitter Line. They are supplied by prominent suppliers such as I<sup>2</sup>S from USA and EBNER from Austria.

With the annual output capacity of 6000 MT of sheet and strip product, the Company is able to supply Stainless Steel grade 301, 304,304L, 316L, 410S, 430 or other grades according to customer's request with thickness down to 0.05 mm and width down to 5 mm. These austenitic and ferritic grades can be produced either in Bright Annealing (BA) , Dull and Extra Dull finished products

### **PRODUCTION PROCESS**



### **PRODUCT SPECIFICATION**

GRADE	TEMPER	HARDNESS (HV) MAX	YIELD STRENGTH MIN (MPA)	TENSILE STRENGTH (MPA) MIN	ELONGATION (%) MIN	WIDTH RANGE ( MM ) MAX	THICKNES	SS ( MM ) MIN
SS 304	ANNEALED	200	201	510	40			
SS 316	ANNEALED	200	172	471	40	500	1.00	0.10
SS 410 S	ANNEALED	200	172	402	20	500	1.00	0.10
SS 430	ANNEALED	200	201	441	22			
Other			CAN BE I	DEFINED UPON RI	EQUEST			

**SOFT PRODUCT** 

GRADE	TEMPER	HARDNESS (HV) MIN	YIELD STRENGTH (MPA) MIN	TENSILE STRENGTH (MPA) MIN	ELONGATION (%) MIN	WIDTH RANGE (MM) MAX	THICKNES MAX	S (MM) MIN
SS 301	1/4 H	175	275	755	20	400	0.70	0.10
	1/2 H	310	500	912	10	400	0.70	0.08
	3/4 H	370	736	1108		400	0.70	0.08
	Н	430	1010	1294	2	400	0.70	0.06
	EH	490	1255	1540	1.5	150	0.50	0.06
	S EH	525	1599	1697	1	150	0.50	0.05
SS 304	1/4 H	220	422	726	30	400	0.70	0.10
	1/2 H	250	598	834	25	400	0.70	0.08
	3/4 H	330	745	971	12	400	0.70	0.08
	Н	375	951	1196		400	0.70	0.06
SS 316	1/4 H	310	518	862	8	400	0.70	0.10
SS 201	Н	450	965	1276	8	400	0.70	0.10

Other

**CAN BE DEFINED UPON REQUEST** 

**TEMPERED PRODUCT** 







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Jl. Industri Selatan 4, Blok PP-4. Lemahabang, Bekasi 17530-Indonesia
p. +6221 8983 0472, +6221 8983 0535 f. +6221 893 7635



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### **SENDZIMIR MILL**

- TO ROLL COIL DOWN TO 0.05 MM.
- EXCELLENT STRIP FLATNESS.
- MAXIMUM THICKNESS TOLERANCE OF 3 MICRONS.







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**THICK GAUGE** 

**MEDIUM GAUGE** 

**THIN GAUGE** 







**TEMPERED PRODUCT** 



### **GRINDING MACHINE**

- TO PRODUCE PERFECTLY GROUND ROLLS.
- MAXIMUM 3 MICRONS TOLERANCE.
- ROUGHNESS : 0.05 RA 0.40 RA







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**EXTRA DULL** 

DULL

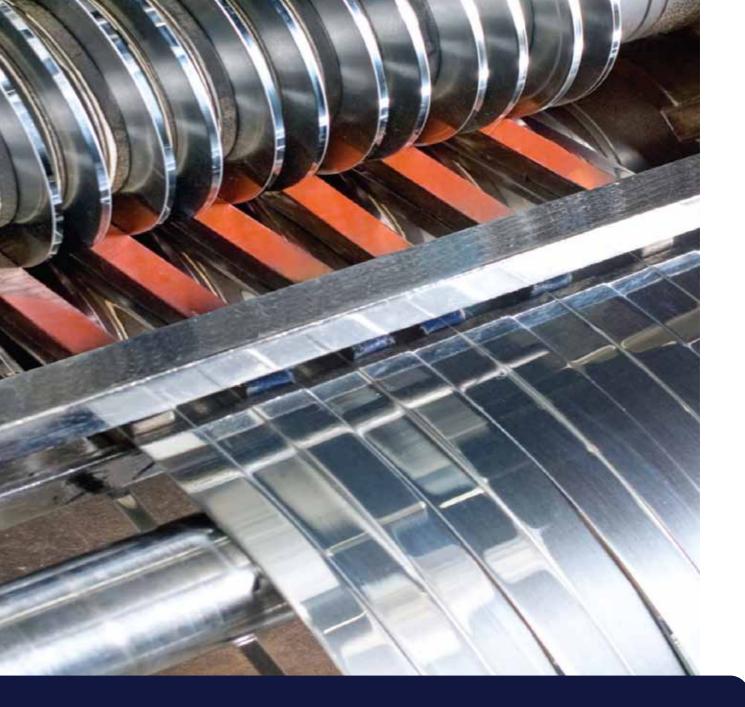
**BRIGHT** 







**SURFACE FINISH** 



### **SLITTER LINE**

- TO SLIT COIL ACCURATELY TO REQUIRED SIZE.
- MINIMUM SLIT WIDTH 5 MM
- CONTROLLED BURR 3-7%





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### **MINIMUM SLIT WIDTH CAN BE AS NARROW AS 5 MM**

**WIDTH 5.35 MM** 

**WIDTH 8.15 MM** 

**WIDTH 10.05 MM** 



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