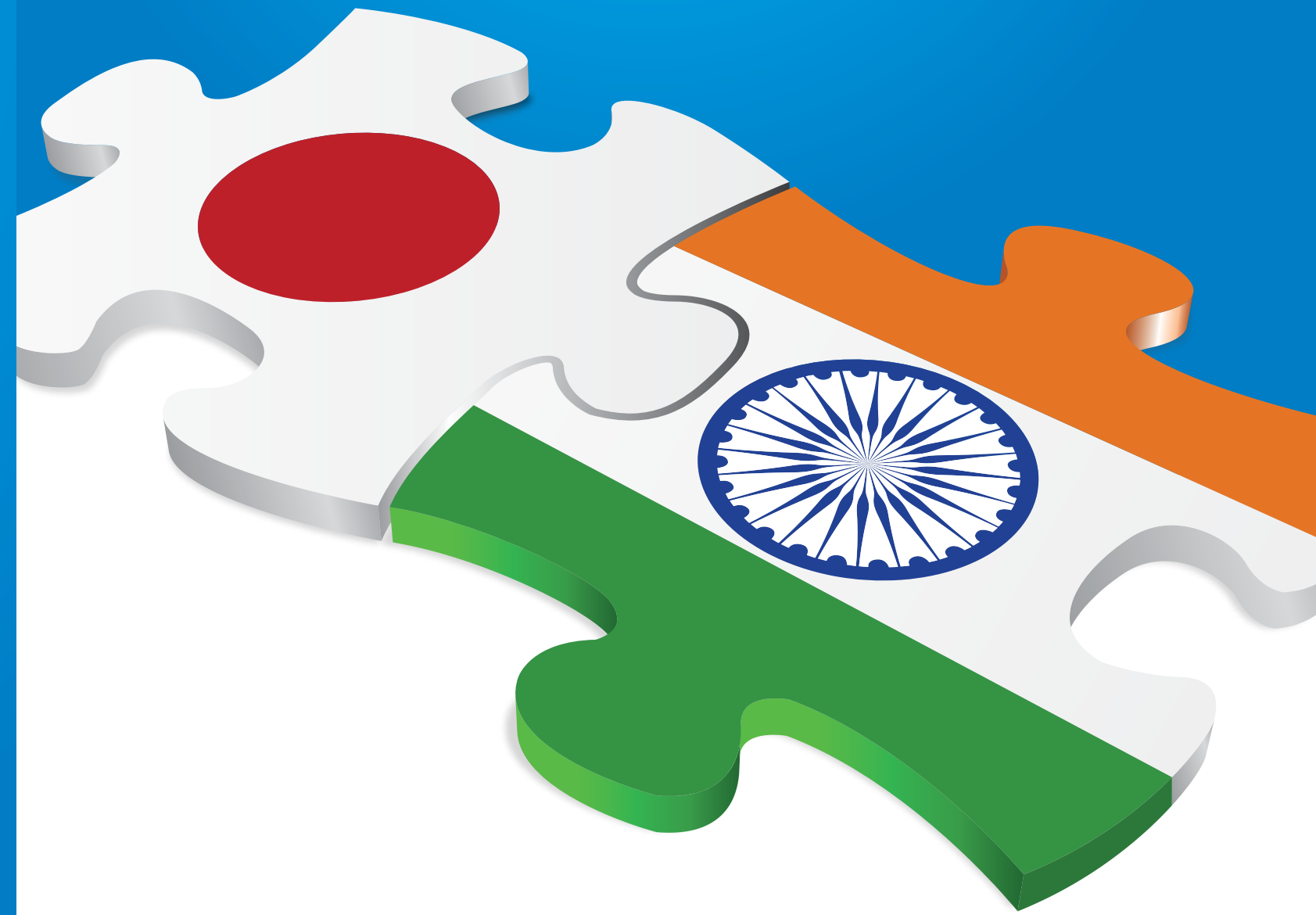




THE PREFERRED CHOICE OF CASTING MANUFACTURERS



Asahi Modi Materials Private Limited

Registered office: 802, 8th Floor, MATRIX, Near Divya Bhaskar Press, Corporate Road, Gujarat 380015, India

Corporate office: 4-7C, DDA Shopping Center, New Friends Colony, New Delhi 110025, India

Sales: +91-9910107325 | Enquiry: +91-7940081200 | Mail: info@asahimodi.com
www.asahimodi.com

 facebook.com/asahimodi.materials

 www.youtube.com/watch?v=5LNRzPaK2Do

www.asahimodi.com

Asahi Modi Materials Pvt. Ltd.



High Strength & Good Flow ability



Inherent benefit of AMM RCS is that it improves the broken core problem in molding & casting reducing problem of Casting Surface.

TECHNOLOGY

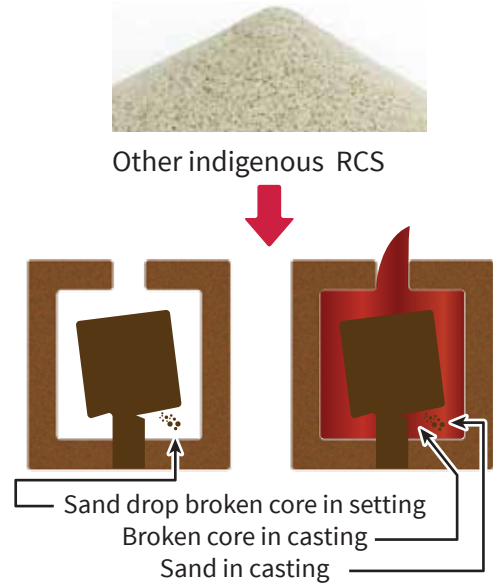
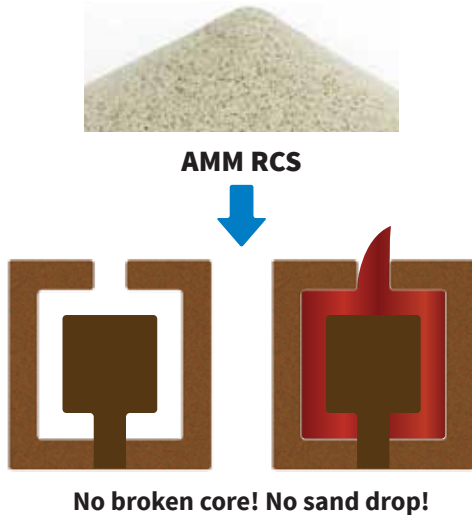


Table flow ability

Item	AMM-RCS	Other indigenous RCS
Shell core weight	46.6g	44.3g
Shell core Volume	30cm ³	30cm ³
Packing density	1.55	1.48

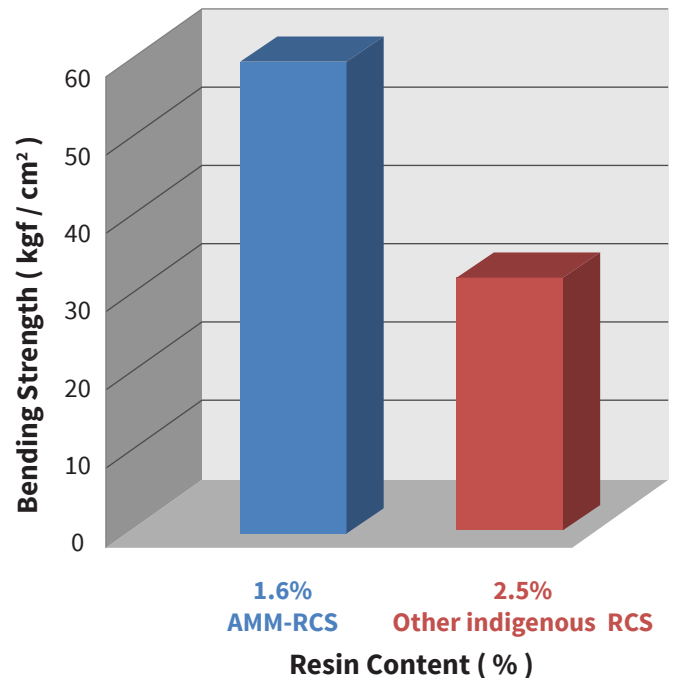


AMM-RCS



Other indigenous RCS

Fig. Comparison of Bending Strength



Advantages

- Reduces a variety of defects related to “broken core & sand drop”
- Better flow ability provides good surface finish to the casting

Asahi Modi Materials Pvt. Ltd.

The preferred choice of casting manufacturers



Casting stronger ties

Asahi Organic Chemicals Industry Co. Ltd of Japan and Modi Rubber Limited of India have collaborated to form Asahi Modi Materials Private Limited (AMMPL), which is involved in the manufacturing of resin-coated sand/shell sand using high quality washed silica sand, artificial sand or cera-beads and solid phenolic resins for automotive and non-automotive original equipment manufacturers in the Indian and overseas market.

The company has invested Rs 300 million on its plant in Jhagadia, Bharuch district, Gujarat (India). It is equipped with the state-of-the-art technology and has the capacity to produce 4000 metric tons of resin-coated sand per month. AMM's plant has the largest production capacity in India compared to other plants.

Japanese technology



Resin-Coated Sand (RCS)



Phenolic Resin for Casting



Asahi Organic Chemicals Industry Co. Ltd.(AOC)

Resin-coated sand formulations Top market share & experience of more than 35 years in Japan. All Japanese automotive & over 700 Japanese casting manufacturers are AOC's clients. As a result, we have more RCS formulations.

Raw material (Phenolic Resin and HQ Silica Sand)

Solid Phenolic Resin from AOC



High strength type | Low expansion type
High cure type | And so on...

HQ-washed Silica Sand



High silica content | High purity | Good Shape
And so on...

Technology and formulations



Phenolic Resin for Casting



HQ-washed Silica Sand



Mixing Technology

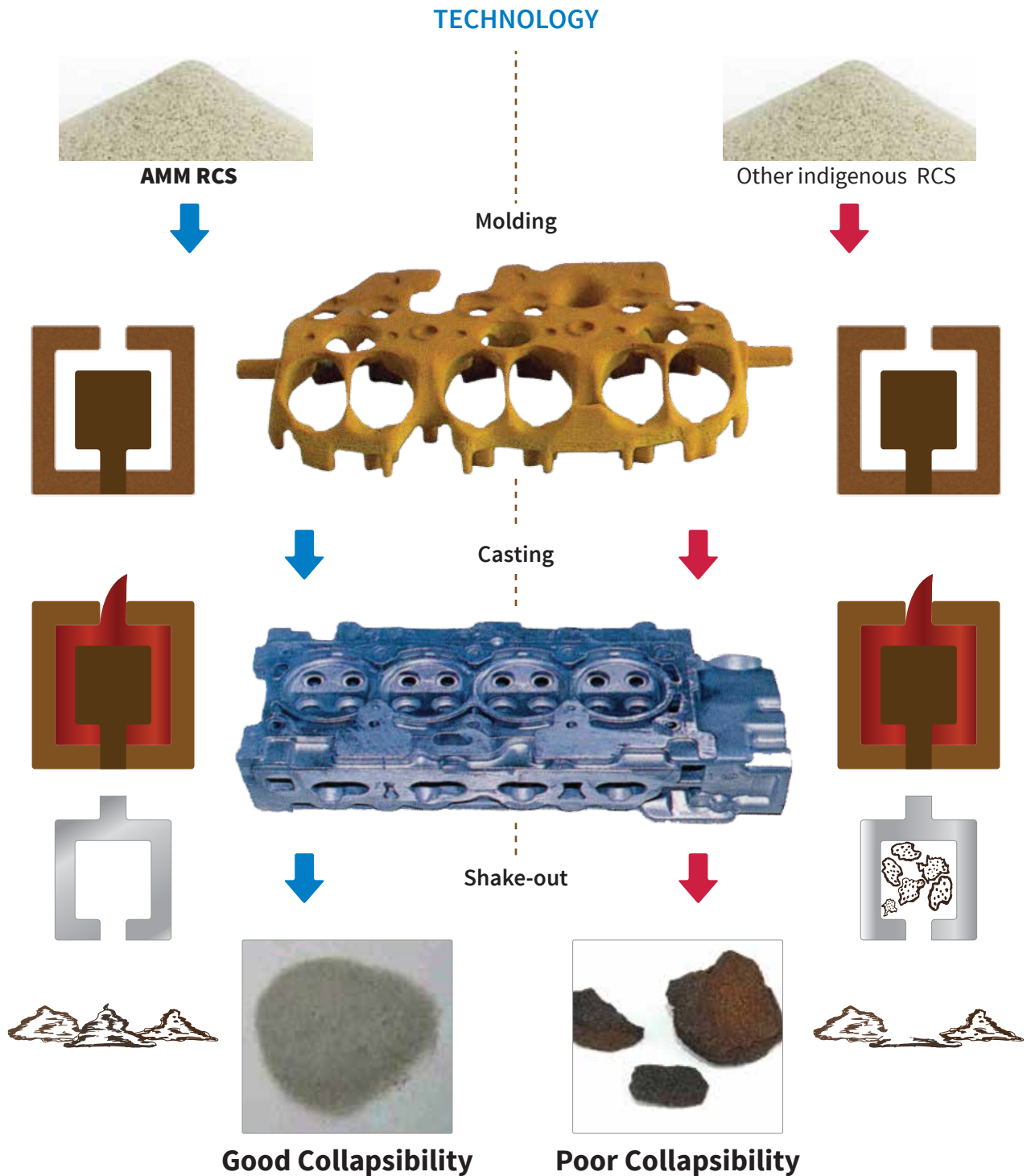
Knowledge of
RCS formulations



AMM-RCS

“Easy shake-out” RCS

Developed for Aluminum castings, offering excellent collapsibility



Advantages

- After casting, most of the shell core faces no de-coring problem
- No Shell Core Sand Is observed in the casting after the heat treatment

“Anti-Sand fusion” RCS

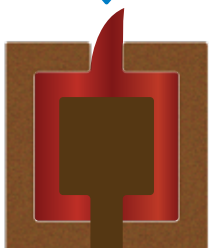
Prevents sand fusion in the casting



TECHNOLOGY



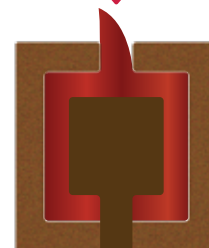
AMM RCS



No Sand Fusion



Other indigenous RCS



Sand Fusion

Molding
Casting

Shake-out

Advantages

- The de-flashing process after casting is minimised
- Reduces rework hence reduces cost

“Low Gas” RCS

Prevents defects like blow hole, Pin Hole and so on in the casting.



TECHNOLOGY

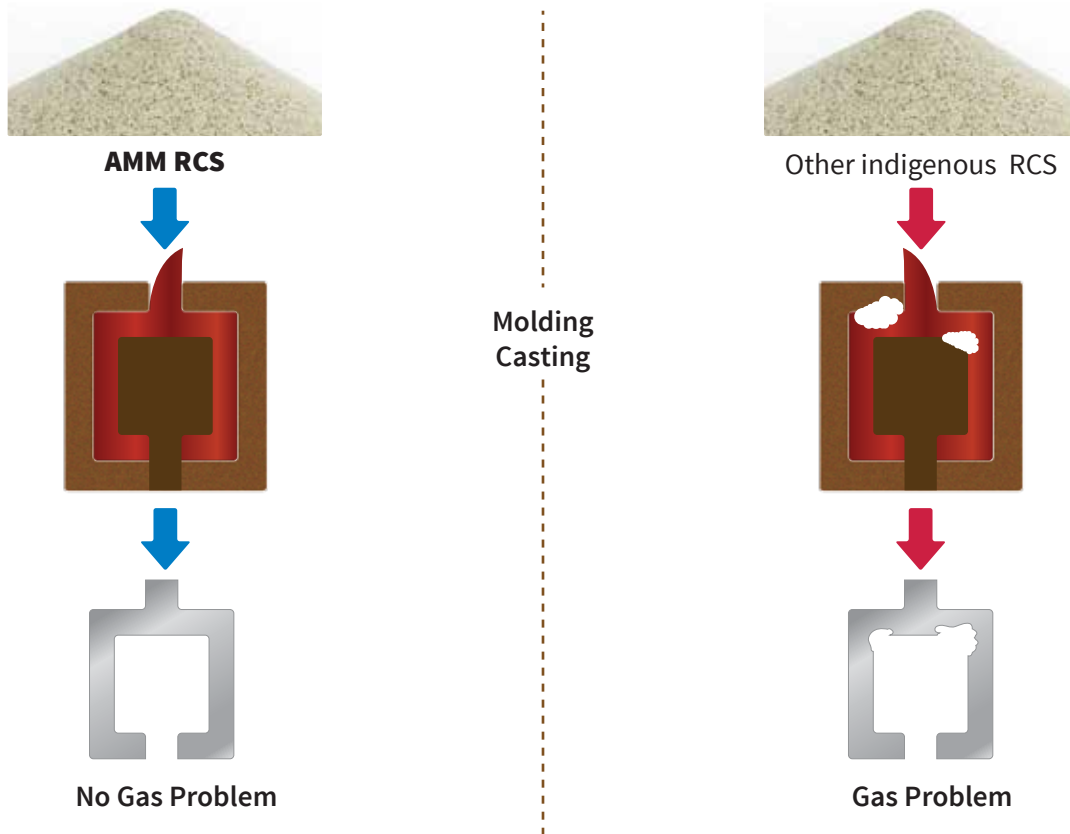


Table of Advantages

Measurement	AMM-RCS	Other indigenous RCS
Bending strength	70 kgf/cm ²	54 kgf/cm ²
LOI	2.6 %	4.4 %
Gas quantity	15 cc/g	22 cc/g

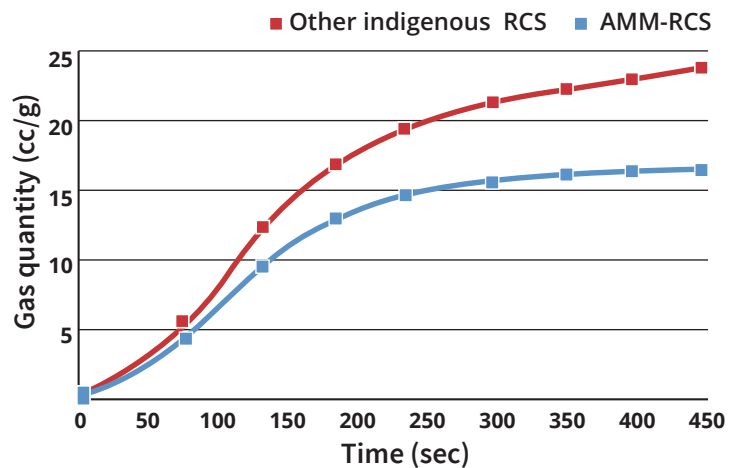


Figure Comparison of Gas Quantity (1000 deg.)

Advantages

- Reduces gas related problems in the casting like blow holes, pin holes and so on.
- Use of Low resin results in lower evolution of gas maintaining the strength of casting.

NINJA RCS MAJOR PRODUCTS



AMM-RCS for Aluminum, Brass, Bronze and small Iron casting

Specification	N1	T66	N2	T33	T50	Other indigenous RCS
Sand → Resin →		HQ-washed silica sand Flake (solid) resin				Silica sand Liquid resin
Resin (%)	1.6	1.4	2.0	1.8	1.3	2.4
Loss of Ignition (%)	< 2.3	<2.1	<2.7	<2.5	<2.0	2.7
Bending strength (Kgf/cm ²)	56	48	51	45	48	32
AFS (-)	49	50	61	57	57	52
Stick point (deg.)	106	106	114	111	105	101
Application example	W/J of Cylinder Head etc	W/J of Cylinder Head etc	Port of Cylinder Head (Hollow core) etc	Port of Cylinder Head (Hollow core) etc	Port of Cylinder Head (Solid core) etc	-

* All the measurement mentioned above in the data are based as per Japanese industrial standards

* Test piece for bending strength is prepared using blow method.

* The values mentioned above in the data are at actuals of our RCS manufactured in Test Plant.

SAMURAI RCS MAJOR PRODUCTS



AMM-RCS for Iron casting

Specification	S1	T12	T13	T19	T19F	T36	Other indigenous RCS	
Sand → Resin →		HQ-washed silica sand Flake (solid) resin						Silica sand Liquid resin
Resin (%)	2.0	1.4	2.0	2.6	2.7	3.0	4.0	
Loss of Ignition (%)	<2.7	<2.1	<2.7	<3.3	<3.4	<3.7	4.4	
Bending strength (Kgf/cm ²)	70	59	58	80	79	96	54	
AFS (-)	52	50	64	52	62	63	53	
Stick point (deg.)	104	105	102	104	105	102	99	
Application example	Cylinder Head etc	Hydraulic Valve etc	Differential Case Turbine Housing etc	Turbine Housing etc	Disc Brake etc	Disc Brake etc	-	

* All the measurement mentioned above in the data are based as per Japanese industrial standards

* Test piece for bending strength is prepared using blow method.

* The values mentioned above in the data are at actuals of our RCS manufactured in Test Plant.



AMM-RCS



Series

Ninja RCS

Samurai RCS

Casting materials

Aluminium, brass, Bronze & Small Iron

Iron

Resin (%)

0.9-2.0

1.4-3.0

Loss of Ignition (%)

1.6-2.6

2.1-3.7

Bending strength (Kgf/cm²)

38-65

50-100

AFS (-)

45-70

45-70

Stick point (deg.)

100-120

98-110

Applications

Cylinder Head / Cylinder Block / Tap
Inlet Pipe / Intake Manifold / Wheel
Turbine Outlet etc.

Cylinder Head / Cylinder Block
Disk Brake / Exhaust Manifold
Turbine Housing / Differential Case
Hydraulic Valve / Camshaft etc.

AMM can supply “**CUSTOM - MADE RCS**” based on customer requirements.