

CURVE AERMET 100

A small bicycle company in Boulder takes a shot at harnessing the raw power and highly touted performance of AerMet 100 steel alloy. RBA puts the bike and material through our usual torture tests and both live to tell about it. Watch out, titanium!

Do frame builders and bicycle riders really need another material to build their bicycles from? Isn't it enough to have a complete universe of heavily manipulated steel tubes? Carbon fiber that is squeezed, laid-up and cured at Trek, Kestrel, Mongoose, Look and Zipp? Aluminum in every tube diameter, thickness and shape imaginable? Mutant metals called matrixes? Wild materials off the elements chart like beryllium and boron? And that battle-ship-gray material that drove a wedge through the bicycle business by defining who has it and who doesn't? Has what? Titanium. Doesn't have it? Any money left after buying it. So is the world ready, willing and able to accept another wonder material? Of course. We are metal groupies! Bicycle riders worship at the base of any pile of shavings that can claim light weight, superior strength and rigidity.

This slavish devotion to metallurgy is not misplaced.

If boat builders had a close-minded approach to new materials, we would be paddling around in hollowed-out logs. If airplane builders got tired of keeping up

with material advancements, a Los Angeles-to-New York flight would have to make three stops for fuel, take 18 hours and only hold 12 people including the flight crew. If the American automobile industry had kept its head in the sand, we would still be driving around in enormous gas-guzzling enclosures of steel and glass—oops, guess that isn't a good example, but you get the point.

The vast array of newly offered frame materials may be overwhelming, but it is vital to the continued advancements of the modern bicycle, not to mention lowering your personal best time trial time (and the interest-earned column on your bank account).

THE NEXT BIG THING

The phone rings all day long at RBA. A couple of months ago we picked it up to hear Curve's Henrik Nejezchleb babbling with unintelligible excitement. Curve had just finished building the company's first AerMet 100 road bike, and Henrik wanted us to test one of them. Heck, we didn't even know what AerMet 100 was, but Henrik's enthusiasm was contagious. "Can you ship it UPS Blue Label?" we blurted.

There is nothing that excites a normally blasé RBA test rider more than a special one-off bicycle. Guys who turn their noses up at \$3000 bikes because they don't like the color are ego-involved in riding a bike that no one has seen before. "Can I take it to the Rose Bowl training ride on Thursday night?" they ask in unison. Whoever gets to ride the one-off always improves his results a few positions. It must have something to do with adrenaline.

COMBAT PAY

There is one drawback to testing bicycles made from new material. You have to listen to a bunch of techno-weenie info from the company that invented the stuff. Now don't get us wrong. We would love to meet weird metal gurus at the annual RBA Fourth of July picnic. We would eat hot dogs, play volleyball, show each other family photos and casually discover the wonders of AerMet 100 over a Snapple. Except for the mustard stains, it would be

cool. We would say, "Let's get together again sometime," but pick up the phone and ask a guy who has invested his life in the esoteric pursuit of mixed metal alloys and you are in for trouble.

They start rattling off the physical properties with buzzwords like "critical region of cooling time," "stress corrosion cracking properties," "DC normal magnetic properties," "decarburation," "normalizing" and on and on until our heads explode. God forbid you give a metallurgist your fax number—22 pages later, you will have a desk full of graphs, charts and glossy print photos with a paragraph on the back of each. If this was *Alloy Action* magazine, this information would be really helpful, but RBA doesn't melt, freeze, stretch or drop bicycles; we ride them (okay, occasionally we *do* drop them).

THE SKINNY ON AERMET 100

We lucked out on this one. Carpenter Technology, the company that invented AerMet 100, seemed like a nice enough bunch of mad scientists. That's not to say they didn't lose us immediately after we asked, "Can you tell us something about AerMet 100?" At least they were nice about it. Their 12-page fax was tough to follow after the "if you do not receive all copies, please call . . ." on the cover sheet, but here is what we can tell you about the stuff.

Alloy: AerMet 100 is a steel alloy that Carpenter Technology says possesses high hardness and strength combined with exceptional ductility and toughness. The alloy is designed for components requiring high-strength, high-fracture toughness and exceptional resistance to stress corrosion cracking and fatigue.

Testimonials: Team Penske used the material in its Indy car drivshafts. Team U.S.A. used it in F-18 fighter aircraft landing

New tubes: Curve Bicycles' first attempt at building a bicycle from the all-new steel alloy, AerMet, is impressive. Industry opinion had the new material pegged as light and flexible with a harsh ride. The industry was wrong. ►