If you are into alpine winter climbing like me, then good, reliable crampons are an essential safety device and a breakage in the middle of a climb can have catastrophic consequences, especially if you free solo a lot of routes like I prefer to.

THE QUESTION:

Are stainless steel crampons better then CroMo ones ?

At first you might ask yourself if this Question is really important enough to be put here - especially if you are NOT a mountaineer like I am and you probably never plan to use crampons at all - so is it worth reading on ?

Yes, I think so, because its a perfect example how prone we all are to be victim to false manufacturer claims about essential equipment (essential = if it fails it can kill us) for the sake of increased market share over other equipment MFG's.

As action sports people we are vulnerable to beeing sometimes too trustful in reputable manufacturer claims about their products.

So to me this tiny episode (Stainlesssteel vs. Cro Mo Crampons) perfectly underlines how important it is to build your own reference grid and make your own informed decissions - be it a crampon, a paragliding carabiner or a new speedflying / paragliding wing or harness.

THE BASICS / BACKGROUND:

For those of you not familiar with alpine climbing and crampons: In alpine climbing crampons are spiked metal plates that are mounted on your climbing boots and the metal spikes are used to improve traction when climbing on mixed surface (Rock and Ice / Snow) and are an extremely important and essential part of equipment for that type of climbing.

If you loose one or one brakes you are more or less rendered immobile in the middle of a potentially dangerous climb - a VERY very serious situation, especially if you are free soloing an

alpine route.

For decades crampons have been made by various manufacturers (Stubai, Grivel, Simond, etc.) from CroMo Steel (Chrome Molybdanum Steel) until recently one Manufacturer (Black Diamond) started marketing stainless steel ones.

At first sight the advantages of stainless steel (mainly beeing rust free for life and no paint layer required that will come off over time) seem obvious, but also the question why nobody did it before (as anybody could have done it easily) arises immediatly.

THE PSYCHOLOGICAL TRAP:

To most of us humans a shiny stainless steel crampon looks sooo much more attractive (we humans seem to love shiny clean surfaces) compared to any dull painted or powdercoated CroMo Crampon that its hard to resist buying the stainless one when you are in the store.

So in this respect BD (Black Diamond Equipement - the manufacturer of the Stainless Steel crampons) did a perfect job in designing a product that will outclass the competition in the first (and most important) stage of the sales process - well made, well thought through, my deepest respect as a marketier for such a move (no sarcasm involved, I really mean that)

Plus with a big MFG like BD you would think that they can't afford putting anything on the market that is not well tested and as reliable or even better then previous manufacturing techniques / materials - sounds logic and reasonable - doesn't it ?

Plus there is the undeniable argument of stainless steel beeing less harmful to the environment (no solvent cleaning prior to painting, no coating process = no extra environmental pollution) - which I (and most other outdoor people I guess) also like - a lot - so another big psychological plus for the Stainless Steel crampon.

THE in between RESULT:

So as you would guess I was more then tempted to buy a pair of their new shiny sharp looking crampons, the "must have" reflex had almost taken over BUT as I know a bit about metals I thought "...hmmm is that material choice and mfg process (cold forging) really suitable for making long lasting crampons out of stainless steel.. ? " so I dug into the topic and by looking at the facts I quickly found that my initial concern was more then right.

THE CONCLUSION:

So to me (as its so easy to proof the essential part of their marketing claims wrong in this case) its a perfect example how easy we all fall for marketing tricks, in this case mostly because of a shiny surface and a more fancy shape - in other sports (e.g. speedflying) and with other equipment its MUCH much harder to detect potential deadly (for the user) design flaws.

THE ANSWER:

So the short answer is NO, go with CroMo steel crampons.

Don't fall for the marketing bullshit and risk your health/life for a shiny crampon surface.

THE BACKGROUND INFO / THE FACTS:

If you want the learn more about the facts CroMo steels vs. Stainless Steels, its best to start with this short interview:

Prof. Emilio Ramous, a mountaineer and internationally renown metallurgy expert from the University of Padua talks on CroMo Steel vs. Stainless Steel for Crampons (albeit its a marketing piece from grivel to fight back black diamond, the collection of facts is correct and this short paper is the best summary about the facts of the stainless vs. CroMo crampon topic I found so far)

interview_emilio_ramous.pdf

for a deeper view into the topic e.g. check Dane's excellent Blog entry with some interesting fatique crack pictures of stainless steel crampons

http://coldthistle.blogspot.co.at/2011/08/crampon-durability-stainless-or.html