

Suit Technology – Have Swimming Companies Compromised the Sport?
By Dale Rogers

The big debate in swimming the past year has been whether the new suits are legal; or rather, *should* they be legal. It has also been asked if the new suits negate the old records by giving an unfair advantage, which swimmers of the past were not afforded. Unfortunately, there is not a quick and easy answer to this question; which is why it has been debated so much recently. Everyone has a different opinion – here is mine:

Should the suits be allowed? NO

Do I attribute all of the records broken in the past year to the suits? NO

I realize the statements above may seem contradictory but they are not. I am one of the largest proponents of *Purity of Sport* you will find. I do believe the suits help to some degree; and therefore they should be banned.

Suits are supposed to have neutral or negative buoyancy, but it is very clear that the new ones float. I am not completely sure how this was passed by or what their guidelines are for testing suits, but it is quite obvious to anyone who has held or worn one of the newer suits that they do, in fact, float. I do not believe they float enough to make any major difference, but any difference at all (even .01 per 1,500m swim) should not be allowed. The rules about this are already in place; just needs to enforce them.

Secondly, the new suits act like a girdle. This is a more significant advantage in the technology in my opinion, but it is also harder to control. The suits simply streamline your body underwater. Without the suits your natural skin moves and ripples as water drags across it, especially at higher velocities such as when you are pushing off the wall. This is easily seen from an underwater camera in slow motion or a still shot of someone pushing off the wall. Think of someone's face all distorted from the g-forces of a roller coaster; (you know the funny pictures you can buy after the ride is over) – this is the same effect I am talking about. The same thing happens in the water which is a large part of drag. However, put a new girdle compression suit on and “Voila!” ... no more distortion. Instead the suit maintains a smooth surface with no disruption for drag.

This is especially advantageous for certain swimmers; i.e. those who aren't in the best shape. If you are already lean and strong with minimal body fat, then the “*skin ripple effect*” off of a wall is significantly less than if you had a little extra cushion to move around.

Here is my biggest argument against the new suits: Consider two athletes – one which has done everything to prepare his body to compete, and another who hasn't watched his diet or worked quite as hard as the other to stay lean – the new suits essentially equalize the two different athletes. How can you protect the purity of a sport when the technology being used physically makes an athlete better without making him work for it?

Similar arguments have been made with other sports' technological advancements, such as fiberglass poles being introduced into pole vaulting. In that case however, it was an even advantage for everyone since the newer poles affected every athlete in the same manner. In our case however, different athletes are affected differently and gain more of an advantage than others and that simply should not be allowed. Advancement in technology is going to occur, but any advancement that gives a physiological advantage to certain body types without working for it is not true to the nature of competition.

Now, having said that I want to make it clear that I do not believe a lot of the hype that everything done in the past few years is simply because suits have gotten better. *You cannot take away any credit from what the athletes have accomplished.* The suit companies would gladly take the credit since they are looking to make a profit, but they just happen to be in the right place at the right time.

Swimming is a relatively young sport compared to running or the traditional athletic events. Because of this, there is naturally more room for improvement. The sport of swimming as a whole made some major breakthroughs during the past few years and the times reflect that. Don't forget that Simon Burnett broke the 200 yard freestyle record by nearly 2 full seconds which had stood for 19 years. Matt Biondi's record (1:33.03) seemed untouchable until Simon burst through the barrier and eventually went 1:31.20, and Simon did it *without* a new LZR or any other of the contested suits. Also, Michael Phelps put the greatest meet performance in history together in Beijing last summer, but of his 8 gold medals, the only World Record he could not break was that of Ian Crocker's 100m Fly (50.40) which Ian did in the old FSII leg suit—which did not have body compression or floating rubber panels.

So as I said before, I think the suits do provide a very small advantage. And no matter how small that advantage may be, it should not be allowed. You cannot compromise the integrity of fair competition with technology. But I give all credit to the athletes for everything they have done in the past few years. Swimming is going to have more breakthroughs and get faster with or without new suits.