METEO	TODAY	H12	H15	H18	H24	TOMORROW	H12	H15	H18	H24
Tempo				*					*	*
Vento		9 🖍	9 🖍	6 🖍	3 🎜		2 🖍	3 🦡	4 5	2 🥒
Mare		$\sim$	$\sim$	$\sim$	$\sim$		$\sim$	~	$\sim$	$\sim$
Mare H. Onda		0.5	0.5	0.4	0.4		0.3	0.2	0.2	0.2

# LVC Final



IN THE LVC FINAL THE FIRST CHALLENGER TO WIN FIVE POINTS, ONE POINT PER WIN, BECOMES THE CHALLENGER TO RACE THE DEFENDER FOR THE AMERICA'S CUP

LCV FINAL FROM 01ST JUNE	1 JUNE	2 JUNE	3 JUNE	5 JUNE	6 JUNE	MATCH	MATCH	MATCH	MATCH	TOTAL	LCV FINAL FROM 01ST JUNE	1 JUNE	2 JUNE	3 JUNE	5 JUNE	6 JUNE	MATCH	MATCH	MATCH	MATCH	TOTAL
LVC RACES	1	2	3	4	5	6	7	8	9		LVC RACES	1	2	3	4	5	6	7	8	9	
LUNA ROSSA Challenge	0	0	0	0						0	EMIRATES TEAM New Zealand	1	1	1	1						4

### FAN ALLA BASE Sorrisi alla Luna



ARANCHA NOI SPAGNOLI SIAMO TUTTI CON LUNA ROSSA, UNA SQUADRA CAPACE DI FARCI SOGNARE



YA LAN VEDERE LA PRUA ITALIANA SOLCARE LE ONDE È PER ME UN' EMOZIONE FORTISSIMA



HO SCELTO DI FARE L'ERASMUS A VALENCIA ANCHE PER POTER VEDERE LUNA ROSSA



BEATRICE GRAZIE AI MIEI GENITORI HO CONOSCIUTO LUNA ROSSA E ORA SONO UNA SUA ULTRAS







**LUNA ROSSA** OGGI LA QUINTA REGATA DELLA SERIE

### Α U Ν R S S $\bigcirc$ DELLA COPPA n=43 6 G I U O 7 Let's Fight GIORNATA DI VENTO DEBOLE. I KIWI TROVANO UNA MIGLIORE PRESSIONE E PORTANO A CASA IL QUARTO PUNTO. OGGI LUNA ROSSA DEVE DIMOSTRARE LA SUA FORZA

#### AT THE BASE

## Tom Schnackenberg: Navigator, Sail maker & Designer

When you mention sail making design Tom Schnackenberg would be one of the first names that comes to mind. He has been in the game for

longer than most and considered to be a leading light in the scientific development of vacht and sail design. Tom has a long and interesting career in the sport, as well has his list of successes in the America's Cup he has sailed as a navigator in numerous campaigns in the 80's & 90's and coached as part of the New Zealand team at the Olympic Games in Barcelona in 1992, Atlanta in 1996 and Sydney in 2000. Tom first joined North Sails in 1974 in San Diego and then went on to open the North Sails loft in New Zealand in 1978. He remembers a defining moment in the summer of 1974 when he was working in the North Sails loft in Toronto, Canada where he received a phone call from Andy McGowan, complaining about the late delivery of a plotting board

for Courageous, a navigational aid used for dead reckoning before the onset of GPS. He dropped the sail that we was working on and promptly phoned the local company to ask, "Where's our dead reck?" He remembered the timing and urgency of the whole situation and it was like the whole world was coming to an end! This was 7 months before the cup started and it was his first real introduction to the cup. He recalls that the America's Cup was a bit like that.

Tom went to a General Motors plant to talk to their computer boffins and used their software to design a spinnaker. They used the same software they used to mould panels for cars and with a bit of work he designed a sail, but ran into the first difficulty of sail design. Even though the sail was designed on a computer screen and was a certain shape, it didn't necessarily fly

that way! But by talking to the technicians, he got the idea of how to write the software programmes. So in 1977 wrote a computer programme that solved the issues of geometry and the shaping of the sails. The programme was nicknamed the "Tin Sail Programme" The design process followed the automotive and aeronautical industries, these companies had big budgets so the research that the sail designers used was funded by university and space programmes

he worked with Ben Lexcen helping with the development but basically sail design was his main task in those 3 campaigns. He then joined the Team New Zealand team that went on to win the cup in San Diego in 1995 as design co-ordinator and navigator. He stayed with the kiwis until 2005. Tom had been a friend with the Luna Rossa team for years, since the early days of the Prada campaigns. The Team used a copy of his match-racing game "TAC"

sponsor driven environment. Luna Rossa is a truly international team but with a strong Italian flavour and methodology. Staging the cup in Valencia has added a whole new dimension, I've enjoyed living in Spain," he says. For Tom the most radical changes to the AC boats have been in the technology. "The biggest thing we have noticed has been in the use of carbon, in the masts and the sails. It used to be very hard to get what you wanted with panelled sails and short



This is Tom's 10th year in the America's Cup, his first real taste of involvement was with Enterprise in 1977. "Initially I was in San Diego working with Lowell North and I wrote some software. a computer programme to improve the design of the sails and we designed a couple of sails using the software". "For a while I was in Newport and on the last week of the campaign I staved in a house working with them to re-cut a few spinnakers and then when they were eliminated I went down the road and helped the Australians" He worked for both the Australia 1 & ll campaigns. He was part of the successful Australia ll team that won the cup in Newport in 1983 After that his involvement continued with the Australians for the next 3 cups. Tom was sail making between 1979-1987,

and enjoyed this very mutch. He used to meet with the "boss" occasionally for dinner and one day after he had finished working with Team New Zealand he got the opportunity to come and work with the Italian team. His role in the team is varied, he is normally following the race boats in the tender. playing with the numbers, making observations and advising on instrument calibrations and performance. But he is also the third navigator on the team so his experience is invaluable. Francesco de Angelis recently spoke very highly of his contribution to the team at a recent America's Cup press conference "Fach team I have worked for has been different he recalls, the teams have all evolved in different wavs. In 1983 there was more professionalism than before and by 1987 the sport became much more of a PR,

battens. We used to use Dacron, then Kevlar and in the early 90's 3DL in Kevlar. In 1995 we started using carbon threads and that made another improvement". "Back in the 70's it was difficult making the mainsails as there were no rules as to the size. You are always pushing the envelope in the variables. Now we have full-length battens and tighter controls. The use of carbon and 3DL means the sails are engineered more precisely now". The costs have escalated but the efficiency of manufacture has improved. In the late 70's you could probably make a jib for \$6-7k now a new jib is more like \$40k. Tom likes the overall format of the cup but would suggest a few changes, he would like to see an increase in the round robins in the Louis Vuitton Cup but he believes the Acts have been a good improvement. "Venues like

Trapani where the whole town comes out to embrace the cup experience have been wonderful". All the ACC boats have the same dimensions so there are now 100 of them and all these teams have spent a lot of time and resources developing these boats so it would be a shame to lose the experience and slow the growth of the class. Tom can visualise his sails just by looking at his computer screen. "With the use of computer technology I look at the screen and look at the numbers and can envisage the design of the boat. The numbers tell the story. I used to know all the sails I worked on by their dimensions. I can conjure up all the shapes from the numbers". "The spinnaker design is still a wide open game," he says. The dimensions are so variable. You can cut spinnakers many ways as long as the overall area does not exceed 512sqm. In 10 knots of breeze you could have 10 different types of shape on the water at any one time. Eventually the best designs get copied and the game moves on. There is still a lot of testing done in the wind tunnel with spinnakers". Of all the Cups in his long and successful career, Tom has fond memories of 1995, when he was working with Team New Zealand "We were very fast and it was fun". The 1983 Cup was also a highlight it was more of an adventure Of all the characters he has met and worked with over the years Tom remembers Olin Stephens as an inspirational figure. He first met him in 1977 and has

met him in 1977 and has observed all the things he has done, he was a genius. Lowell North has also been a long time working colleague and friend. There is no doubt the years of experience and knowledge that Tom has would be a real benefit to any America's Cup team.

### LVC FINAL

Split start, Luna Rossa sulla destra, al primo incrocio è davanti • ITA 94 si presenta al secondo incrocio con un vantaggio di oltre 30 mt e difende la destra • i neozelandesi, grazie a un buono, riescono a colmare la distanza e accompagnano Luna Rossa oltre la lay line virando la prima boa con 19" di vantaggio • l'imbarcazione italiana sempre sotto controllo dei kiwi non riesce a colmare il gap e chiude la quarta regata con un ritardo di 52"





QUOTES OF THE DAY



#### Ray Davies Strategist Emirates Team New Zealand

We knew it was going to be a tricky day with very shifty conditions so our call at the start was to start at pace but there was not a huge amount in it. It didn't go our way in the first half of the beat and Luna Rossa did a great job of sticking to their guns and getting fully into that right-hander. It was definitely not a good first half of the race for us. I can understand their reasoning on tacking to leeward of us on the first beat. with the left-hander they would have wanted to get back in phase and drag it out to the layline. With that wind direction the left can be pretty strong at times. I think its guite a common occurrence on the match racing circuit for a comeback to happen. In this race we certainly got the start of the race wrong and were in a compromised situation. We got lucky from there so it just goes to show things can change dramatically, we can't rule out anything in these fickle conditions, both teams made mistakes out there. But it feels pretty positive in the camp right now.



Don Cowie Mainsail Trimmer Emirates Team New Zealand

The reason for the boats acceleration is interesting, I've been telling the guys at the base that its called the mainsail because its all about the main! I think we have got a boat that is going nicely in those conditions, we are really happy with the way the boats going and the boat tacks and gybes well. But we have a very similar profile mainsail to Luna Rossa so I don't think there is much difference there. It is all about the mainsail trimming!

I don't think we have a faster boat in under 10 knots, in lighter conditions it gets very puffy and shifty, it was a bit of a strange day, a funny wind direction for Valencia and a bit scary but the guys at the back of the boat and the trimmers did a nice job so we got a great result. In any sporting event when you get on a role its nice but you also have to remember that you have to concentrate on going out there tomorrow and working on winning one more race. You won't see us celebrate until the end of the event!



### Torben Grael Tactician Luna Rossa Challenge

Yes we definitely could have got closer to them on the second cross but we felt that we were on a lefty and thought the right side looked good and took the position we thought was safe. TNZ hung on to a nice lefty in pressure and made a huge gain in a short period. We had a good call from our meteorological team and we got what we wanted from the start and got a big separation and a nice shift and managed to get a small lead. They had little separation and not a big shift but managed to get a bigger cushion on us. It's guite disappointing but they are sailing well and getting all the opportunities, so congratulations to them. It's hard to say if we are missing any speed in these conditions, we are not slow but we are not a rocket either! Certainly tacking the boat doesn't like that weather too much but we hope the conditions change tomorrow. It's a hard situation to be in but you have to decide what to do in the wind conditions you are given and in these conditions I thought we were doing the right thing.



### Jonathan Mckee Mainsail Trimmer Luna Rossa Challenge

If there was any way we could speed up the boat in these conditions obviously we would have done it already. We are not ruling out that we might make a technical change, it's always a possibility. They are going well, especially in that wind range they have been sailing fast. We could be a little bit more competitive in more wind, that probably plays into our hands a bit more but we are sailing well. The weather team made a great call and we got the first shift. It was a very tricky day in those wind conditions, the wind direction is probably the least predictable as to what is going to happen next. We are not going out there with a do or die strategy, we want to go out there prepared for the wind conditions we expect and sail smart and fast as we have done in the last four races. I don't think vou are going to see any radical changes in strategy. We haven't won the races so far but that doesn't mean that we have been sailing the races the wrong way. We are just going to go out and do the same things we have been successful with.