

THE TITANIC STORY

*“Until the moment she actually sinks,
the Titanic is unsinkable.”*

– Julia Hughes

It was the summer of 1907.

The most powerful financier in the world, John Pierpont “J.P.” Morgan sat back in his chair, took a puff on his Havana cigar and nodded his ascent to J Bruce Ismay, the Chairman of White Star Line, across the smoke filled room.

Ismay’s smile belied his not inconsiderable relief. As well as being a powerful and imposing figure, J.P. also happened to have a controlling interest in International Mercantile Marine (IMM), owners of White Star Line. His decision could make or break Ismay. But J.P. trusted him, as it was Ismay who’d negotiated the sale of White Star to IMM five years earlier, and he gave the nod to Ismay’s bold strategy that day, despite the eye-wateringly huge investment required.

What they’d agreed upon that day was to build three massive new ships at vast expense – upwards of £3 million apiece – to compete against the rival Cunard fleet for size and luxury. One of them was to be named RMS Titanic. It would be the biggest ship in the world, with the capacity to carry up to 2,435 passengers, plus 892 crew.

The Most Technically Advanced Ship of its Time

Not content with it being merely the biggest ship afloat, designer Thomas Andrews (overseen by Lord William Pirrie, a director of both White Star and the ship-builder Harland & Wolff) incorporated a number of radical new features, making it the most technically advanced ship of its time.

These innovations included:

- The hull was divided into sixteen watertight compartments by fifteen bulkheads extending above the waterline. The ship could stay afloat even if four of these compartments became waterlogged.

- Eleven remotely activated watertight vertically closing doors to seal off the main compartments, operated from the bridge.
- The very latest technology in its power plant and propulsion systems, giving it a power output of over 55,000 horsepower.
- A complex central electronic control panel, which controlled everything from lighting, ventilation and heating to generators and condensers.
- State-of-the-art radio equipment with a range of up to 1,000 miles supplied by Marconi, who also provided two of their staff to keep it operational twenty-four hours a day.
- All the ships clocks were set by being linked a central clock, located on the bridge.
- Its whistles were the largest ever made and could be heard from a distance of up to 11 miles.
- The ship had four elevators (lifts), and some of the first-class passengers even had telephones, although they could only be used between cabins.

In addition, it was fitted out to provide levels of luxury normally only found in the very best hotels.

The ship was equipped with 20 lifeboats with the capacity to carry 1,178 people, significantly more than the legal minimum at the time of 990 for a vessel of that size. These numbers seem ridiculous in hindsight, but the prevailing thinking of the time was that lifeboats would only ever be needed to ferry passengers from a stricken vessel to a rescuing ship and would be expected to make a number of return journeys. No-one envisaged that a catastrophic and rapid sinking could occur. Indeed, the ship's Captain Edward J Smith was quoted a few years earlier as saying "I cannot imagine any condition which would cause a ship to founder. Modern shipbuilding has gone beyond that."

The Maiden Voyage

The Titanic's hull was laid down on 31st March 1909 at the Harland & Wolff shipyard in Belfast, and just over two years later, on 31st May 1911, J.P. Morgan, Ismay and Lord Pirrie stood alongside 100,000 spectators to watch and cheer the launch of the massive vessel.

After fitting out and sea trials, RMS Titanic was signed off as being seaworthy on 2nd April 1912, immediately setting sail for Southampton to prepare for her maiden voyage.

The Titanic finally sailed for New York on 10th April 1912 carrying 922 passengers. It picked up a further 274 at Cherbourg and another 120 at Cork, before setting out across the Atlantic. The weather worsened, but as they sailed closer to Newfoundland it became much calmer and colder, and other ships gave warnings of icebergs ahead. Titanic continued at full speed.

Then, at 11:40 p.m. on Sunday, 14th April Frederick Fleet the lookout reported an iceberg straight ahead. The First Officer William Murdoch gave the order to reverse engines in an attempt to avoid a collision, but to no avail. The ship hit the iceberg and was holed below the waterline along the starboard side, breaching five of the waterproof compartments.

Believing the ship to be unsinkable, the crew were ill prepared to abandon ship. Many lifeboats were launched only partly filled and ultimately only 705 survivors were rescued, suggesting there were more than 450 empty spaces.

Titanic began to sink bow first, and as she sank deeper water spilled over the bulkheads started flooding the other compartments. By 2:20 a.m. the bow was sinking faster, and as the stern began to rise up out of the water it snapped under its own weight, breaking the ship in two.

Within three hours of striking the iceberg, Titanic had sunk and begun its slow fifteen minute journey to the sea bed over 12,000 ft below.

The Telegraphers' Tale

During the voyage, passengers were so enamoured of the telegraphy system that they used it incessantly to send messages to friends and acquaintances, bragging about their experiences on board this great ship. This placed a huge strain on the two Marconi operators – Jack Phillips and Harold Bride – as all messages sent and received had to be translated to or from Morse Code.

As the journey progressed, they became increasingly over-worked, tired and stressed. So much so that when Phillips received a message from the wireless operator on board the SS Californian at 11:30 on 14th April warning of icebergs ahead, he replied curtly, "Shut up, shut up, I'm busy." He was so tied up in trying to get the backlog of passengers' messages to Cape Race, Newfoundland for onward transmission, he simply couldn't cope with anything else. It was barely ten minutes later that RMS Titanic struck the fatal iceberg.

JARGON BUSTER: Morse Code
was developed by an American artist called Samuel Morse, in 1836. It was used to transmit information in the days before voice radio, using combinations of short and long beeps (shown as dots and dashes on the coding sheet) to denote different alphanumeric characters.

"We have struck iceberg ... sinking fast ... come to our assistance."

Phillips was obviously mortified by the part he'd played in the events that night, and worked slavishly in the wireless room sending out distress messages, refusing to leave his post as the ship became waterlogged and sank. He was so obsessed with his task that when Bride – who survived the wreck – went into the Marconi room at around 2:05 a.m. as the water was rushing in, he found a crewman trying to steal the life-vest from Phillips' back. Phillips was so focussed on his work he hadn't even noticed what the man

was up to! Phillips refused to leave his post, and is recorded as continuing to send out distress calls as late as 2:17, just before the ship finally slipped into the depths at 2:20. (Some reports have him making it to one of the life rafts where he later perished, though there is no evidence of his body ever being recovered so this seems unlikely.)

Tragically, after his altercation with Phillips, Cyril Evans, the operator on the SS Californian, switched off his wireless and went to bed. The Californian, only a few miles away and just within viewing distance, never received Phillips' distress calls and so it never went to the rescue, probably at the cost of many hundreds of lives.

Why Did RMS Titanic Sink?

As with all 'accidents' there is no one single cause, but a series of events any one of which could have averted disaster.

Let's take a look at some of these:

- The design of the waterproof bulkheads did not go all the way to the top of the ship. Apparently this was due to concern that it would reduce the amount of first-class accommodation, which was on the upper decks. It has been argued that full height bulkheads could have saved the ship.
- Following the recovery of samples from the wreck, it's been suggested that some of the three million rivets may have been made of sub-standard iron causing them to break under the strain of the impact, although has been denied by the ship-builders Harland & Wolff.
- Captain Smith maintained full steam ahead, despite seven different warnings of icebergs from either his crew or other ships. Had he slowed down they may have had time to steer clear of the iceberg. Of course he may have felt under pressure to keep the ship to its schedule, due to the presence of J Bruce Ismay on board (who, controversially, was one of the few male survivors).
- The elegant rudder design, based on those of 18th Century sailing ships, has also been implicated as being too small to adequately steer a ship of the Titanic's size.
- It's also been suggested that putting the engines into "full astern" made it harder to steer the ship, and they may have been able to avoid the iceberg if they'd continued powering forward to create better flow across the rudder. This seems unlikely though, given that the iceberg was spotted at only 500 yards and massive ocean liners are notoriously slow to change direction.

There were also other factors that could have reduced the death toll had different decisions been made. Clearly, if the crew had been adequately briefed and trained in deploying the lifeboats a great many extra lives could have been saved.

Also, the crew of the Californian reported seeing rockets coming from the Titanic. They informed their Captain, Stanley Lord, but it was assumed the rockets were fireworks and no action was taken. He could have asked the radio operator to check with the Titanic, but instead they tried communicating using the ship's lamp. However, the range was too great for this to work. The subsequent enquiries concluded that all lives could have been saved had they responded when the first rocket was sighted.

INTERESTING FACT: 14 years before the Titanic sank, an author by the name of Morgan Robertson wrote a novel about a ship called the Titan. In this tale Titan was the biggest ship in the world and was considered unsinkable. And, just like Titanic, it hit an iceberg in mid Atlantic on a cold April night. The novel was called 'Futility'.

And what if the radio hadn't broken down the day before, creating the backlog of messages that got Phillips so stressed out?

Recent research has also suggested that the unusual atmospheric conditions that night may have contributed to refracting light in a way that made things appear smaller than they actually were. It's possible that the size and proximity of the iceberg didn't become apparent until it was too late as a result of this phenomenon. It could also have contributed to the distress flares appearing smaller, giving the impression they could have just been fireworks.

We'll never know...

The Titanic Factor

This tragic story brings us to the three critical points that I call 'The Titanic Factor'.

1. **"It's too big to fail."** We make a huge assumption about systems – whether it's a ship or an entire economy – that they will always work and continue serving their purpose. If we think a ship is too big to sink, or a bank is too big to fail, we're probably wrong. There's always the possibility that circumstances could conspire to bring down even the most 'invincible' systems – even whole countries or civilisations. We need to be open to the possibility that things may already be going wrong. Things that could undermine our social, economic and ecological systems. Things that could hole us below the waterline if we don't heed the warnings.
2. **"I know what the problem is, and how to fix it."** Things don't go catastrophically wrong due to one thing. This means the solutions will not be found by trying to fix just a small part of the system. We need to question the whole system and the assumptions it's based on, and make sure it's fit for purpose. As we've seen, there is no one reason the Titanic hit that iceberg, why it sank and why it cost so many lives.

3. **“There’s nothing I can do about it.”** There were a great many people involved in the Titanic story, and all played their part. The designers, ship-builders, crew, passengers, people on the other ships in the area. Everyone had a responsibility. Everyone had the capacity to make a difference. Even a third-class passenger could have said, “But what if the ship did sink? How would we get people on board the lifeboats?” and demanded an answer. When we see things that don’t look right, we have to speak up. Every single one of us has a personal responsibility to make a difference when things are wrong – poverty, injustice, cruelty, even the simple unfairness or unkind behaviour we see around us in our everyday lives. And you, reading this, you have the power to make that difference, to do your part in creating a better future – for yourself and for those around you.

Main sources: National Geographic, Computerworld, HistoryOnTheNet, Wikipedia, thetitanicstory.com.