

# Containers: The First 50 Years

## - *Pioneers and Personal Recollections* -

*Ulrich Cramer*

### **The Forerunners**

Although the container era is often regarded as commencing in April 1956, one could argue that it started much earlier. "Lift Vans" were used in 1911 by the Bowling Green Storage and Van Company in New York. A "Piggyback-System" was developed for the Pennsylvania Railroad Company (which after a merger became the "Pencentral" ) in the early 1950's by the Flexi Van company.

The people behind this development were Leo Mellam and Cecil Henkels (the founders of Flexi Van) and Sol Katz (owner of Strick Trailers). They developed the "Road-Rail-Unit" that we know today as the container. The original unit only had bottom container castings, because a horizontal transfer system was used.

### **The Birth of the Container**

At a later stage of the development top corner castings were introduced for vertical transfer and The "stackable, seagoing" container was born. The original patent for the container corner castings was with Strick Corporation. (*See separate photo file, with the original documentation*).

### **Seatrain and Sealand**

One of the pioneers of containerisation was Seatrain Lines of Newark. In parallel with Sea-Land, Seatrain established – using converted T2 tankers and C2 vessels - a container service between their own port on the Hudson River and Puerto Rico. The ships had rails and lorries under deck, served by one hatch and a stationary crane.

The concept was similar to the Pan Atlantic (later Sea-Land) "Ideal-X", a converted T2 tanker which became the first scheduled container ship. Pan Atlantic used Van-Trailers whereas Seatrain started with containers (leaving the trailer running gear behind). The next generation of Seatrain vessels had hatches all over and container cell guides and a "travelling" crane.

### **The end of the 50's: which way would the industry go?**

During the late 1950's, there was great uncertainty as to which way the container industry would develop. Sea-Land (using 35ft units) and Seatrain (using 40ft units) modified further C2 and T2 type ships for their Newark-Puerto Rico service. They skipped the shipboard gantry crane.

Matson Navigation (using 24ft units ) started the Hawaii service with containers in 1958 and converted a C3 vessel into a cellular container ship, the *Hawaiian Citizen*, in 1960.

In 1959, Grace Line (using 17ft units) converted C2 vessels into full container ships - the *Santa Eliana* and *Santa Leonor* - for their South America service. On their maiden voyage, these vessels were tied up for months by stevedores who refused to unload them. South America was not ready for change.

In 1961, Union Carbide (using 30ft units) converted T2 tankers into a container carrier.

Moore McCormack Lines (using 20ft and 40ft Flexi Van units) started a South America service with containers as well. However, they withdrew the vessels from this service very soon and at the end of the 1960s put them into a transatlantic service, from which they withdrew after a short while, to quit altogether.

US Lines, well known for its famous transatlantic liners, converted their Mariner class vessels to cellular container ships.

### **The First Leasing Company**

Flexi Van was the first company to offer container equipment for lease - and therefore should be regarded as the first "Container Leasing Company".

Leo Mellam and Sol Katz were the founders of the leasing companies Uni-Flex and ICS (Integrated Container Service), together with Michael Kluge. Sol Katz was also involved in creating other leasing companies - TIP, Rentco and Xtra.

Flexi Van was the lessor of the first generation containers to ACL (the first European consortium with Wallenius Line, Swedish American Line, Transatlantic, Holland American Line, Cunard and CGM as partners).

### **Arrival in Europe – and more questions?**

It was 10 years before Sea-Land erected the first container gantry crane in Europe - at the Neustaedter Hafen in Bremen - to handle containerised US military supplies.

In Europe, road regulations had to change to accept 40ft containers. Which kind of road chassis or bogies will be used? What kind of rail wagons could be used and what height could the containers be?

### **Which kind of container design is best?**

Many types of containers were developed, but which was best? The original aluminum one? Exterior or interior post? FRP-Plywood? With aluminum or steel frame? A combination of steel frame with aluminum cladding? Or a steel container with corrugated walls?

Nobody really wanted steel containers. It took some time and effort to develop the right design and manufacturing technologies to convince everybody.

And people were still learning about handling containers: should they be left on road or terminal chassis - the original Sea-Land and Seatrain concept?

### **Containers and Ro-Ro**

In 1966, I was the Product Manager at MAFI, when we got the order from ACL to develop their container and ro-ro handling system.

On 22 February 1966, I invented the "Rolltrailer", also known as the "MAFI-Trailer", to be used by ACL to handle containers and flatracks on board the vessels' ro-ro decks. In November 1966, MAFI was called in by Litton Industries in the USA to send a team of experts to develop the ro-ro cargo handling system on board the FDLS project (Fast Deployment Logistic Ship), a "Super" military supply vessel.

I went there and met the "brains" behind containerisation in the USA, John Rubel, Eric Rath and Prof. Ernest Frenkel of the MIT. They introduced me to Matson Line in San Francisco, SeaLand in Newark and Seatrain in Newark as well as to Tom Newman, founder of CTI (Container Transport International) in New York.

### **Built in Germany**

I visited Tom Newman on my way back to Europe at the end of December 1966 and he gave MAFI the order to supply him with 20ft x 8ft x 8ft 20 tonne steel containers, made in Europe.

These were the first ISO-type steel containers to be built in Germany. ACL joined the production in Germany with orders for 40ft steel dry cargo, steel open top and steel insulated containers.

This spoiled the leasing business of Flexi Van, who had already ordered aluminium containers for ACL. Leo Mellam came to Stockholm to meet me at ACL's office. Terje Reuter, ACL's technical director, was present. It was the intention of Mr Mellam, that if he could not convince ACL to go for aluminium containers, he could at least force MAFI to use the license for his "coup-able corners" used to couple 2 x 20ft units to one 40ft. After the meeting, Leo Mellam dropped his intention to sell a license and placed an order for steel containers instead. This was the start of a great friendship – but that is another story!

### **The problem with grey...**

MAFI built the first steel container in grey, to make them look like aluminium containers. Upon arrival in Rotterdam, in early 1967, they showed already signs of rust. With Terje Reuter we were on our way to the port of Rotterdam to look for a solution. He saw people sandblasting a building. This was the moment when the shotblasting and repainting of steel containers was born.

His decision was to use a "rust brown" colour for repainting – and the most common colour for steel containers was invented. There was still the problem that the ACL logo and marking was originally developed for aluminium containers. Suitable for the 3-part ACL logo, I had a prototype built with "flat" panels at the ends of the long side. This was the birth of the large corrugation panel for marking and owner's logo of steel containers.

### **Steel versus Aluminium and FRP**

In those days, I talked to every shipping line to try to convince them to use steel containers instead of aluminium or FRP. You could not even talk to Sea-Land about this - in their opinion, the only "real" container was an aluminium container. Matson Line and Grace Line favoured FRP-Containers.

Seatrains considered steel containers, however, with a "water-based zinc coating". When ACL arrived with its new steel containers to Newark for the first time, the stevedores refused to unload the containers. "The roofs of steel containers are too slippery" was their argument. MAFI used a thick paint and brush-painted it at the spot and throw sand over the wet paint. The stevedores were satisfied.

At this time we used a flat roof made of 1 mm mild steel. With the extra coating mentioned above, these containers had the longest lifetime in ACL's fleet.

### **Hapag-Lloyd: "Containers - NEVER!"**

After the merger of the North German Lloyd in Bremen with Hapag in Hamburg, to become Hapag-Lloyd in the mid-60s, I was called in by Mr Otte, head of Hapag-Lloyd's new Container Department. He wanted to know why I was always in the USA. He looked at me straight in the eye and told me that Hapag-Lloyd would NEVER have containers on board their vessels.

### **Painful experiences**

A few years later, they quickly changed their mind. However, they stated that they would "never have steel containers". They bought 40ft aluminium containers with steel frames from Rheinstahl-Henschel in Kassel/Germany, which were a failure. The manufacturer made a big loss on the order and closed production. The container production line was sold to Fruehauf France. Hapag-Lloyd's next order was for 20ft and 40ft

FRP-Plywood Containers with IWT in Lübeck/Germany. This was also not a success - either for Hapag-Lloyd, or for the manufacturer. These days, of course, everybody uses steel.

Interestingly, at the same time, IWT got the first order from ACT London for 20ft aluminum containers. Overnight, the value of the pound sterling went down and the Managing Director of IWT, Otmar W Thienes, instructed his people to buy immediately all material in pound sterling abroad and to set up a new production line at Kampnagel in Hamburg. After the completion of the order IWT closed the production line, having made a big loss.

These two deals were painful experiences.

### **Start of CONTEC**

In 1968, Leo Mellam arranged a meeting between Sol Katz (of Strick) and myself. I was still working for MAFI and I met Sol Katz at the Guard Room of the Biltmore Hotel in New York. Sol Katz's first question was: "What would it cost me to buy MAFI?" After I replied that MAFI was not for sale, he responded with: "OK, then you buy lunch today!"

In 1971, I left MAFI and started my own container engineering and consulting company - "CONTEC". At that time Flexi Van, in New York, was MAFI's best customer. Leo Mellam and Cecil Henkels came to Europe to hire me to set up their European operation and equipment procurement. My own business was brand new and I had a full order book, so I turned down Flexi Van's offer. Leo Mellam did not give up and eventually bought CONTEC - so in the end I had to work for Flexi Van.

After three years as a division of Flexi Van, I was able to buy back CONTEC - for \$1.00!

### **Still talking containers!**

Now in 2006, 32 years after buying the company back, I am still running CONTEC – but focusing on Ro-Ro Equipment only.

Sol Katz and I are still in close contact - and still talking a lot about the ways and means of further development of container equipment.

The world's first container was Strick's "Sea Trailer". Sol's latest idea is the 45ft x 8ft 6in x 9ft 6in GEO-Container, an international, pallet wide "Trimodal" unit.

So after 50 years, we are still "talking containers"!

*Ulrich Cramer  
Ganderkesee, Germany  
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