



Agenda

Anti-trust statement

Trader container production

Ramping up production to meet high demand

Quality challenges

Trader containers



CTC has a strong working team of professional surveyors and over 30 years old container industry experience.

CTC provides services to shipping lines, lessors and traders.

- 1. Full line quality control for its customers.**
- 2. Marketing information support**
- 3. Trader in space bookings and other necessary negotiations**
- 4. Container services to individual customer requirements**





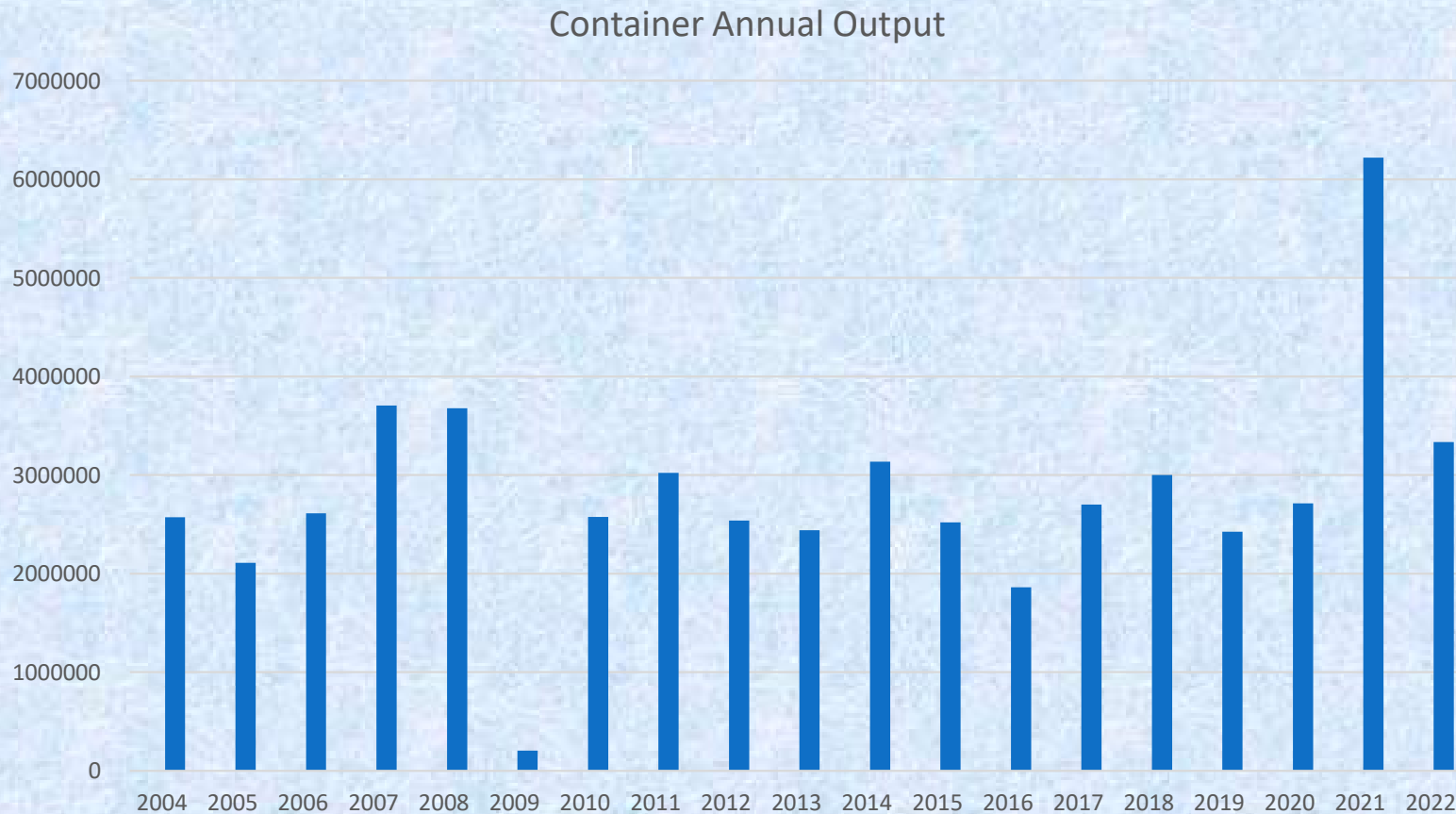
Summary:

- 1. High speed, high volume due to high demand**
- 2. How 6.6 million made in 2021?**
- 3. Acceptable quality but found roughness**
- 4. Long term durability of WB paint?**
- 5. Potential container coating of next generation?**
- 6. CTC introduction**
- 7. Trading containers photo.**





1, High speed - High volume - High demand

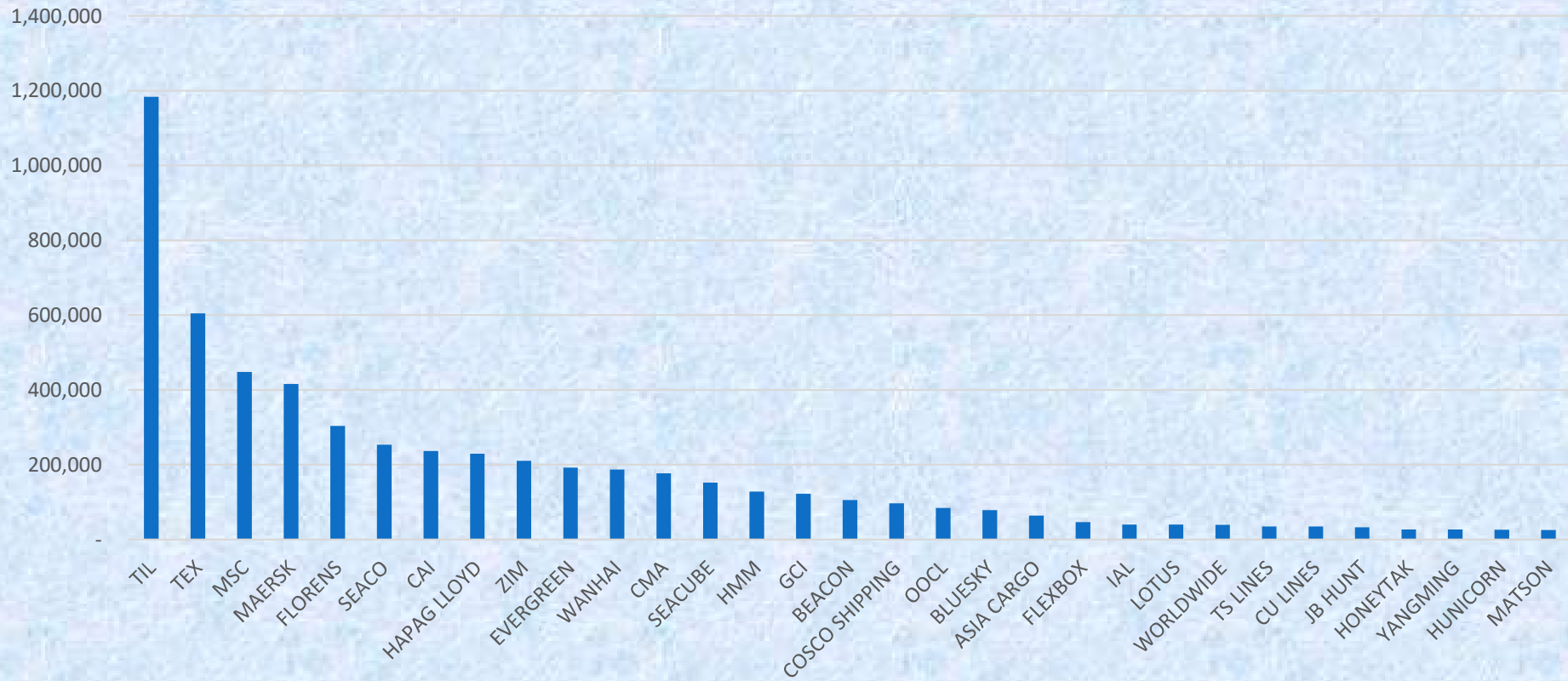


More than 6.6 million TEU dry cargo containers in 2021, in 2022 dropped to 3.3 million.



- Top 5 buyers in 2021**

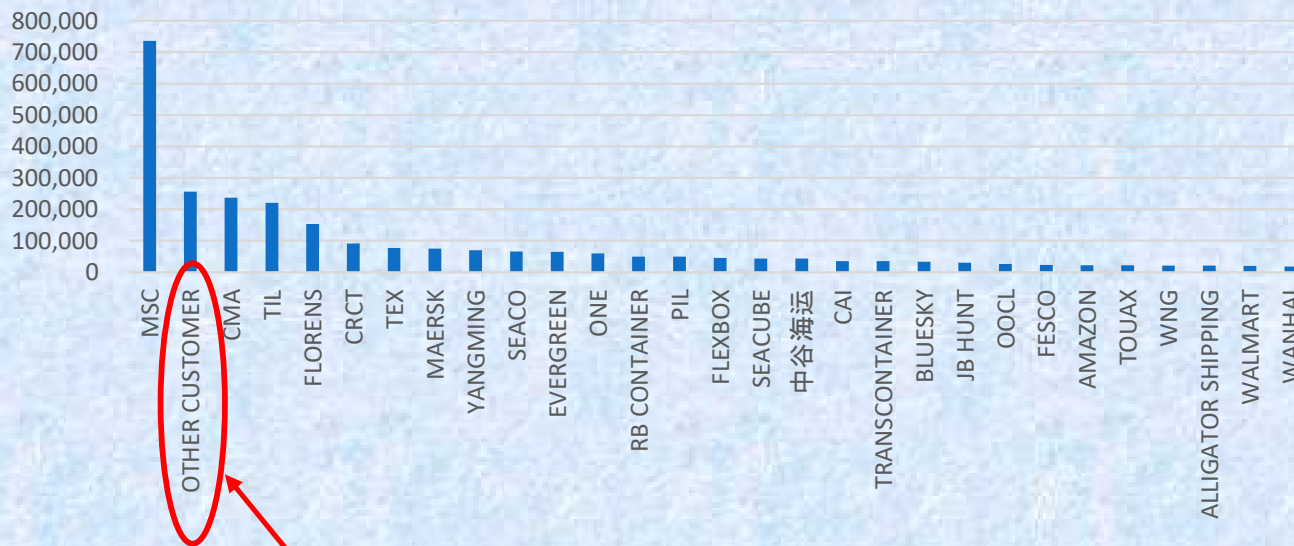
2021 Order Volume (TEU)





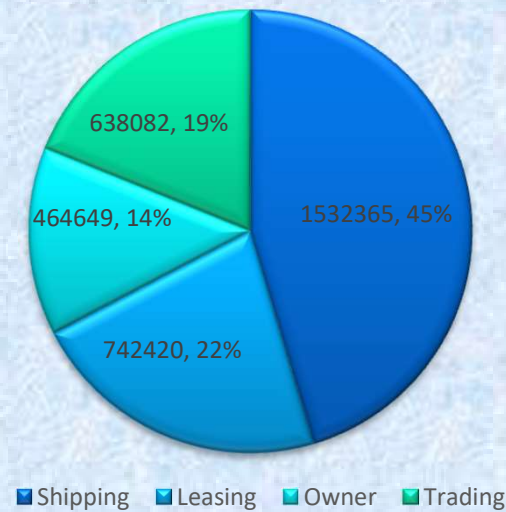
- **Top buyer fleet in 2022**

2022 Order Volume (TEU)



Trading container from various company without detail name

Marketing Share 2022



Totally 638,082 trading containers were built in 2022, 19% of the production, in the last 3 month in 2022, majority output form production line are trading containers.



- **High Inventory in 2022**



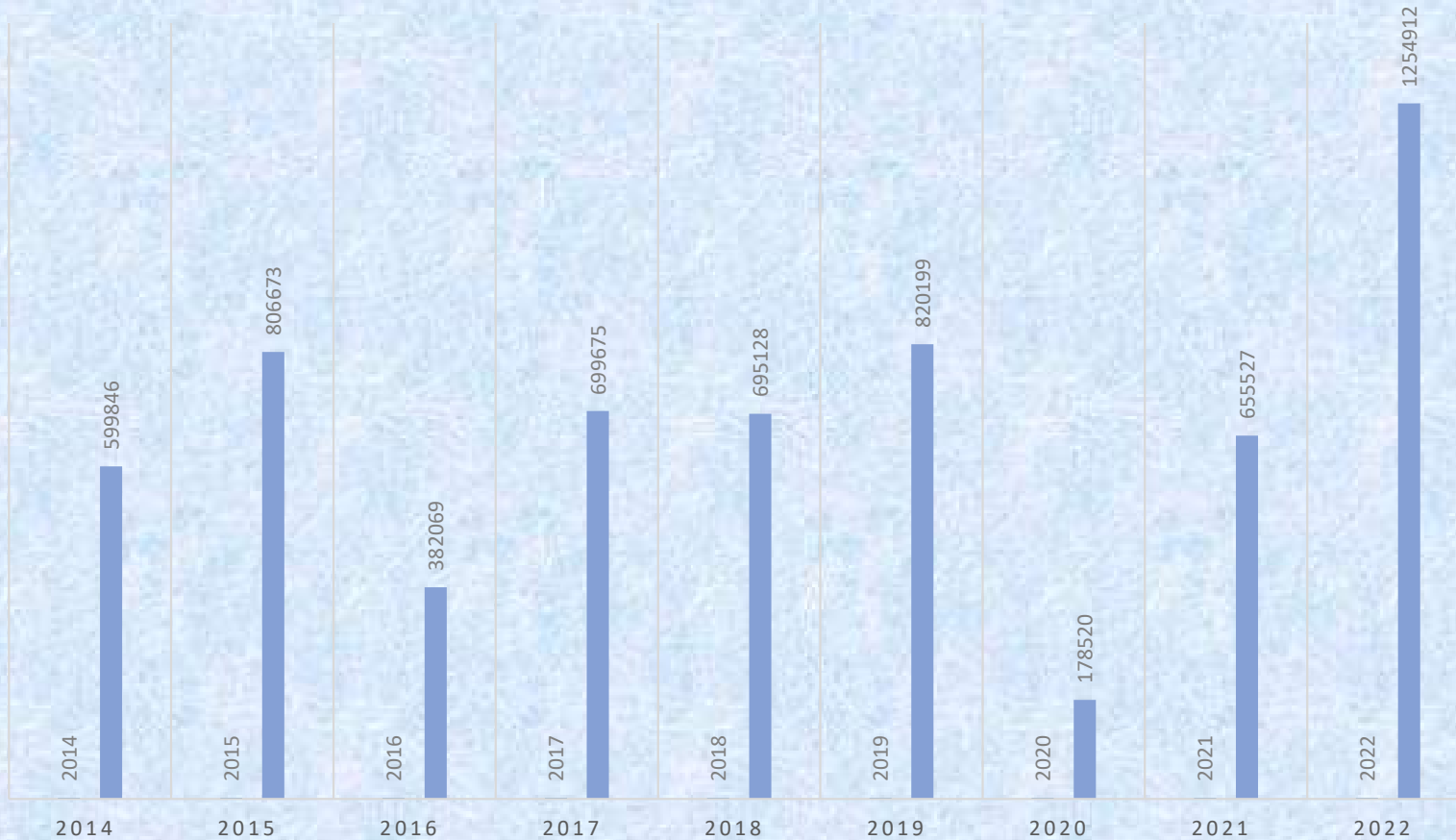
ISO container inventory in factory reached to 1.25 million TEU.

From Sep, CCIA restricted member factories with totally 150 work hours output till end of 30th April 2023. That limited totally 600,000TEU in 8 months.

Except factories in Guangdong area, Majority factories have finished the restricted quantity by the end of 2022, and the production line will be closed till end of April 2023.



INVENTORY IN DEC 2014-2022



December 2022 recorded the highest Inventory in the history.



2. How did manufactures meet high demand and make 6.6 million TEU in 2021?

1. High line speed -1x40'hc by **ONE minute** (even 58 seconds), instead of 3 minutes before.
2. High working pressure - workers even moved canteen into production lines.





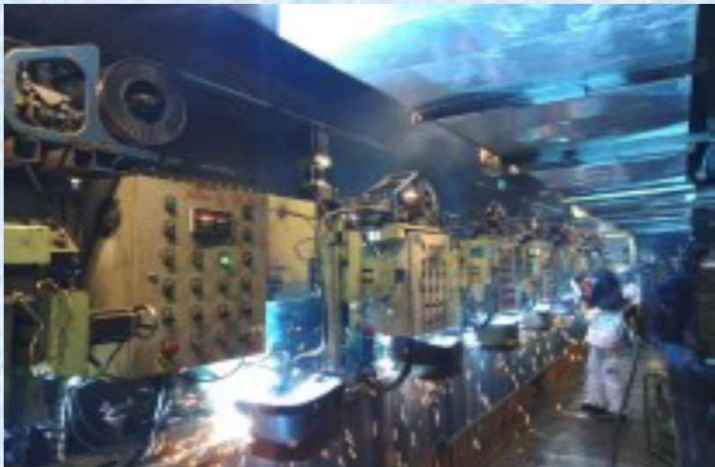
- **Enough Manpower**

Recruitment of new workers





- **New Machinery - Robots**





2. Investment in robot paint application systems





- **Supply chain ramp up**

From the end of 2019, factories encountered series of supply crisis:

1. Corner casting shortage, price doubled
2. Floorboard shortage, container factories sent workers to floorboard factories to help increase production
3. Paint and decal shortage, factories stop line to wait for supplies;
4. Shortage of materials caused prices increase, inspired by the economic price, suppliers tried to meet demand.





- **Production line layout and process improvement**

1. From 2019, all factories modified paint lines because waterborne paint is very sensitive and need ovens for drying. Additional drying capacity prerequisite to ramp up production.
2. Buffering area set up to enable continuous production in the case of line abnormality





- **Production line layout and process modification**

Optimized to ensure the speed at each stage can meet designate line speed.

1. Sub assembly line layout re-organized to fix more robots and save material transfer time.
2. Paint line more stages and ovens to ensure the drying of WB coating.
3. More automatic floor drilling machines for finishing line.





- **Full time working on lines**

1. Canteen moved near to production line.
2. In some factory, even portable toilets and air-conditioned containers have been installed near production line to save workers' walking time.
3. Production line equipment maintenance team on full alert to ensure malfunctions promptly repaired





3. Metal preparation

Acceptable quality but found roughness issues

1. Most container factories working one shift daily. Working hours for main line limited by CCIA. But no limit for metal preparation, no any limit.
2. invested to upgrade the metal preparation line, compared to 2 years ago, it's more automatized. Output capacity sufficient



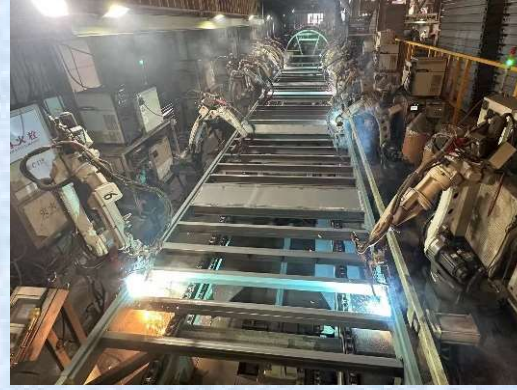
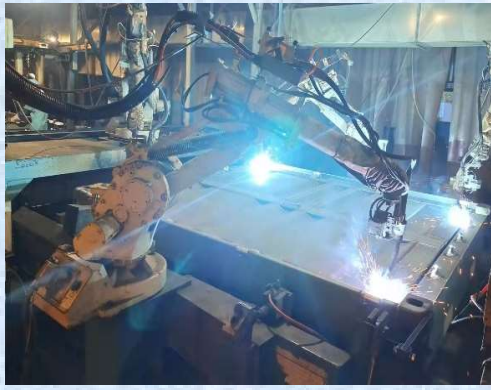
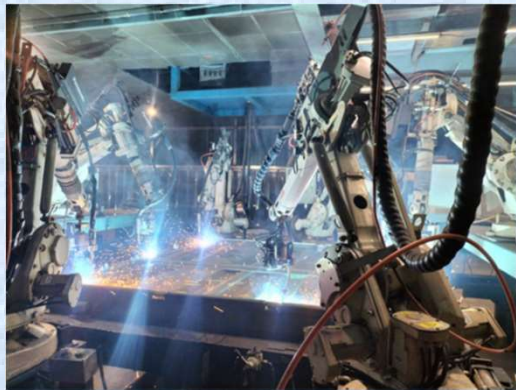


- **General Welding quality —Acceptable**

Factories ramp up production, welder team not stable and welding quality suffered.

But some good points:

1. A lot of automatic welding robots have been installed and the quality acceptable;
2. Some factories did not speed up the production and quality acceptable.





- **Welding quality —Common defects**

General welding quality is lower than before, but after inspection and repair, structural welding and light/water tightness is assured

1. Skip welding, and poor manual welding shape on base structure;
2. Weld burn through, lack of penetration, and poor repair on roof panel and side panel auto welding;
3. Light and water leakage weld defects more common than before;

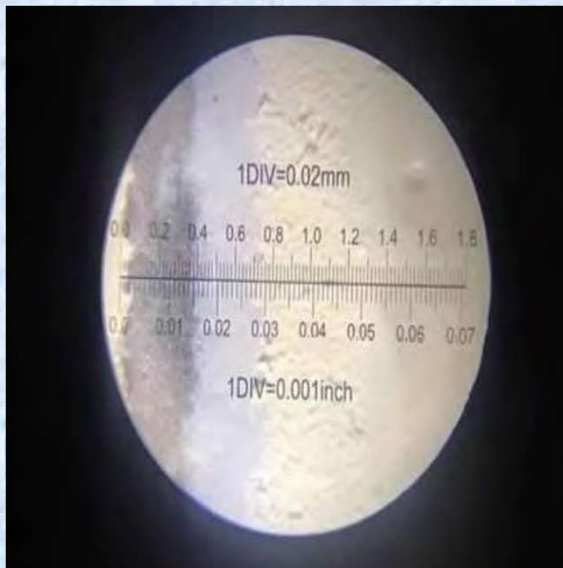




- **Coating application quality—Just acceptable currently.**

1. Many factories had upgraded the paint lines and were ready to speed up.
2. More automatic spray robot used.
3. Oven temperature **adjusted to higher degree** than before, that caused some defect as: rough surface on roof and door panel, pin holes on the high DFT area, crack on the welding seam area etc.,

Now, inspectors /paint representatives got more and more knowledge and experience on waterborne paint. Many defects could be found and repaired in the factory, through inspection and control by surveyors, the paint quality just acceptable.

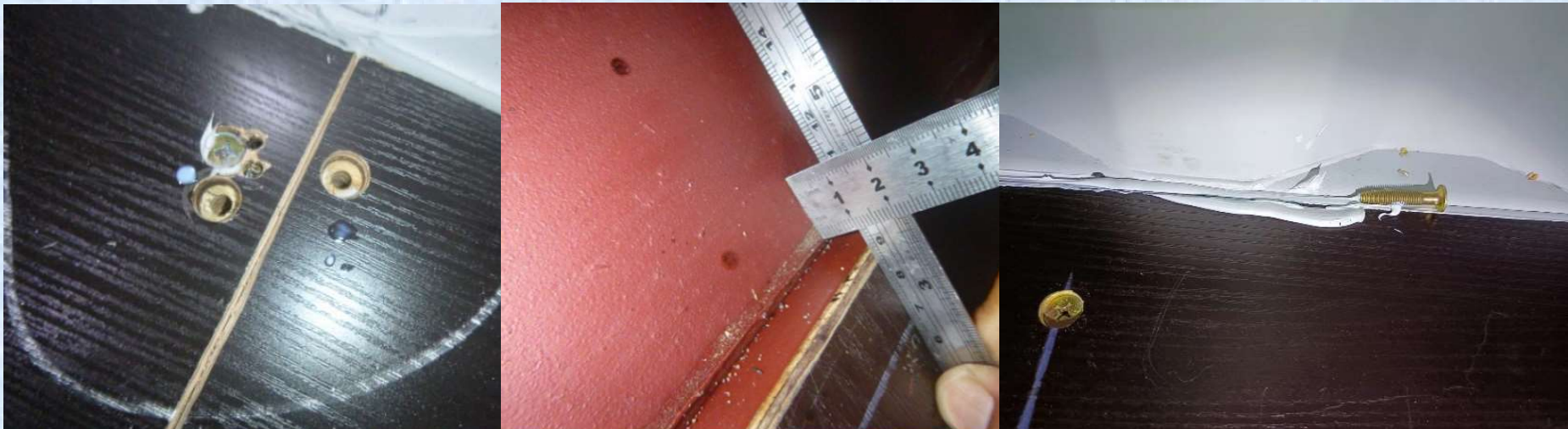




- **Floor board fitting quality issues —due to not enough working time**

Generally, quality of final line not as neat as before even after remedial works offline in the yard.

1. Floorboard installation: 20GP has at least 188 screws and 40HC has 346 screws, to finish so many drills and screws within 1 minutes is very difficult, uneven floor, miss drill , improper countersunk and miss screw appeared more than before;
2. Sealant application: skip sealant, shrinkage and miss sealant appeared more than before;





4. Long term durability of WB paint?



- 1. Waterborne paint application facilities and procedure have been updated day by day, Industry becomes more experienced with waterborne paint application**
- 2. Long term durability of waterborne paint still a big challenge.**
- 3. Waterborne paint production started from 2017, more and many containers will out of 5 years warranty from 2022 on.**
- 4. Many companies conducted tracking inspection of waterborne containers built in 2017-2019, the result could not relief anyone.**
- 5. In some individual case, rust and peel off even could found on many non-damaged areas, especially on some containers built in 2017.**



5. Potential container coating of next generation?

5.1 High solid waterborne coating

Advantage:

1. Lower VOC emission;
2. Possible better protection & quality;
3. No need to update the paint line and facilities;

Disadvantage:

1. Test production already finished several batches, still need some improvement;

5.2 Powder coating

Advantage:

1. Nearly no VOC emission;
2. High gloss and hardness;
3. Good anti-impact and anti-abrasive performance;
4. Accumulated more than 6600 units 40HC successful production record;

Disadvantage:

1. Lack of in-service tracing record;
2. Need to build a special paint line, big investment;
3. Current powder line only can produce 20' and 40' ISO container;

Even if powder coating are proven better quality and more economic than waterborne, it would not be suitable for every factory and waterborne coating will continue to be available.

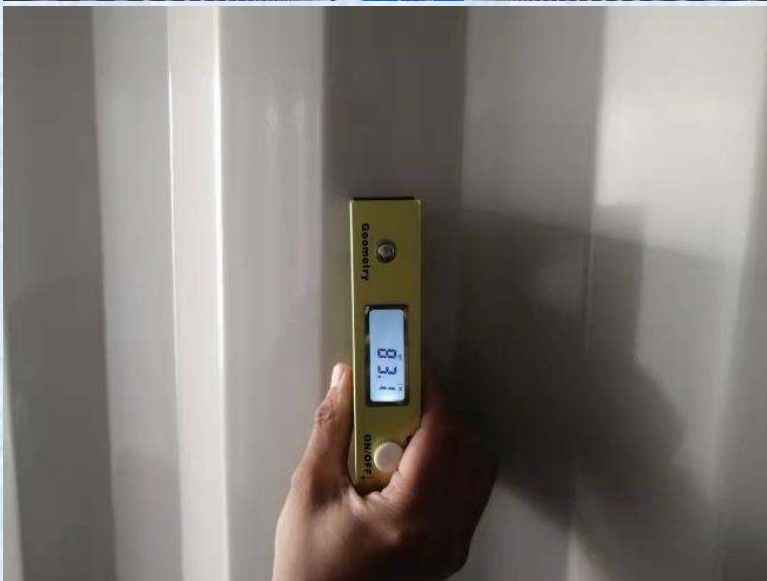
Both high solid coating and powder coating are all possible coating of next generation



Powder coating application

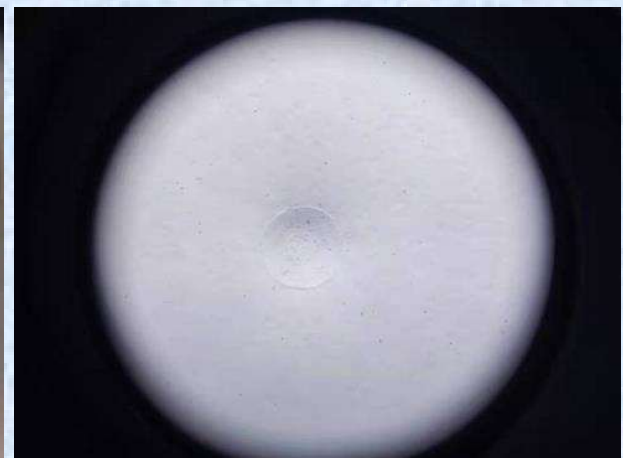


Powder coating--high gloss appearance





Powder coating—anti-impact property





6. Who are CTC

CTC includes two companies:

Shenzhen **C**ontainer **T**rade **C**ompany

Shenzhen **C**ontainer **T**echnical **C**onsulting Company



CTC registered at Shenzhen, China

2003 Container trading

2006 Commenced container survey and consulting company



CTC Services

RANGE OF SERVICES

A. Depot Inspection : (Conducted by 15 Professional Surveyors)

Depot Auditing, On-Hire Survey,
In-Service Survey & Off-Hire Survey.

CTC is an insurance consultant in Shenzhen, China for container industry.

B. New Building Inspection: (Conducted by 13 Professional Surveyors)

Container Manufactory's Auditing, Paint lines evaluation.

Material Supplier Auditing, witness of Lab testing.

Full Lines Inspection/Full line Control,

Final Yard Acceptance Inspection/Double checking, join survey.

C. Technical and Marketing consulting:

Free technical and marketing information for your customers to help them seize the proper opportunity of good price and space to place order. To ensure the specification and products are correct from the beginning.



CTC' Customers are :

- Blue Sky
- CMA-CGM
- China Navigation
- China Railway
- EVERGREEN
- EMKAY
- Dancontainer
- Florens
- Hapag-Lloyd
- IAL
- COSCO
- Pan Asia
- PIL
- Seaco
- TSL
- TDS
- Wan Hai Lines
- YANG MING
- ZIM
- Honeytak
- VOCEAN
- Zen Box



7. What could CTC is do for you?

CTC has a strong working team, professional surveyor with over 30 years old container industry experience.

CTC provides:

- 1. Full line quality control for its customers.**
- 2. Marketing information support**
- 3. Trader in space bookings and other necessary negotiations**
- 4. Container services to individual customer requirements**





Trade production quality ensure case

Trader containers sometimes considered “**Low Spec container**,” because:

1. Thin panels, lighter than shipping line/lessor boxes;
2. Paint spec are lower than shipping line/lessor boxes;
3. Floorboard spec lower than shipping line/lessor boxes, not reached 7260KGs;
4. Some trading containers have no 3rd party quality inspection, done by factory themselves. Risk of reduced quality material. User complaint might rise later.





CTC's service for support CSTA members

Established in 2003, CTC provides services to shipping lines, leasing companies and traders.

For supporting CSTA members, the service is mainly focused on:

1. Review specifications carefully of each batch, even 50 units or 100 units, to ensure the containers are correct and confirm to requirements.
2. Provide professional surveyor & pay extra attention to for full line checking (same as major customers) to ensure the material treatment/parts/welding/painting finishing is confirming to the given specification and industrial standard;
3. CTC team will make good and timely communication with trader, to ensure on time delivery.



Trading containers-Blue Sky Boxes 20GP—EOD (Easy open door) with 12 ventilators





Trading containers-Vocean boxes 20GP—EOD (Easy open door)





Trading containers-Vocean boxes 20GP—DD (Double door)





Trading containers-Vocean boxes 20GP—OS (Open Side)





Trading containers-Dancontainer 10 foot set container





Trading containers-Dancontainer 40HC—OS (open side) 4 pair door on side





Trading containers-Blue Sky boxes
40HC—OS (open side) Fully open





Any question?

Thank you very much!

