



# Aluminum Wire Supplier Screening

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## OBJECTIVES

- The customer is looking for high-end aluminum wire suppliers around the world, which are used in photovoltaic wires. Due to the requirements of the usage scenarios, ordinary products on the market cannot meet the needs and need to be customized. Therefore, SMM is entrusted with the screening of Chinese suppliers and the final contact between the two parties is completed

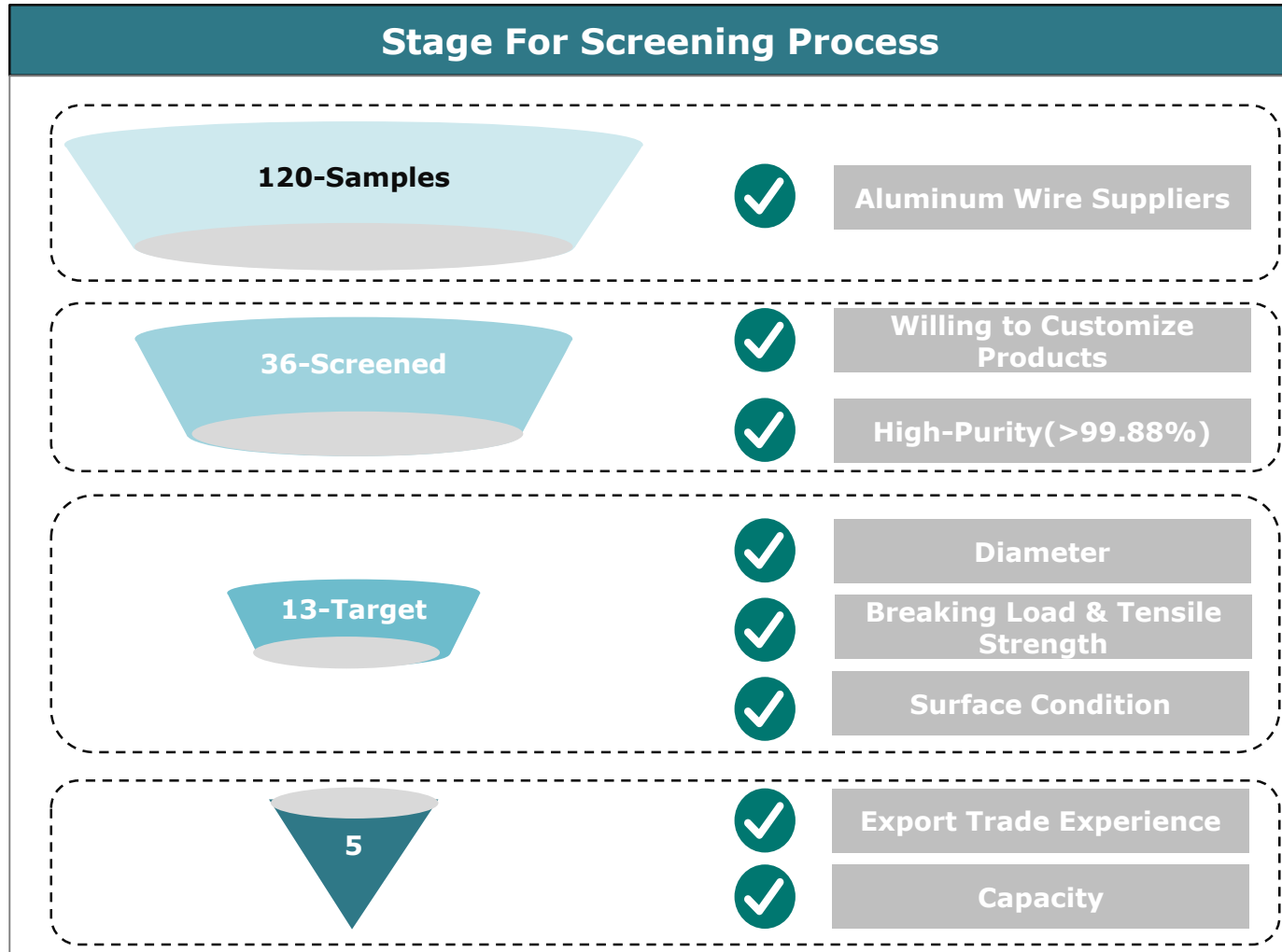
## PROCESS

- Methodology
  - ▶ Determine the initial sample population to be screened
  - ▶ Set up the screening standard
  - ▶ Conduct primary research
  - ▶ Identify the “willing” group and “unwilling” group with reasons
  - ▶ Accompany client for the first touch with target supplier
- Sample Size
  - ▶ Aluminum wire supplier (120)
- Project Time
  - ▶ 6 weeks

## DELIVERABLES

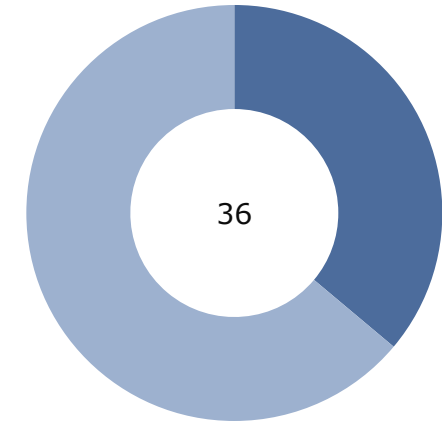
- Basic Info.,
  - ▶ Company name, shareholder, location, contact
  - ▶ Capacity, production, expansion plan
- Customized product specification
  - ▶ Grade (Al xx, etc.)
  - ▶ Aluminum purity ( $\geq xx\%$ )
  - ▶ Diameter (xxx-xxx $\mu\text{m}$ )
  - ▶ Breaking load (xxx-xxxgf)
  - ▶ Tensile strength (xxMpa-xxMpa)
  - ▶ Unit (xxkm/spool, xxkg/spool)
  - ▶ Surface condition (less than xx ng/cm<sup>2</sup> of organic contaminants)

# Aluminum Wire Suppliers Screening Process



## Screened Aluminum Wire Suppliers


- Target companies
- Partially Qualified Aluminum Wire Suppliers

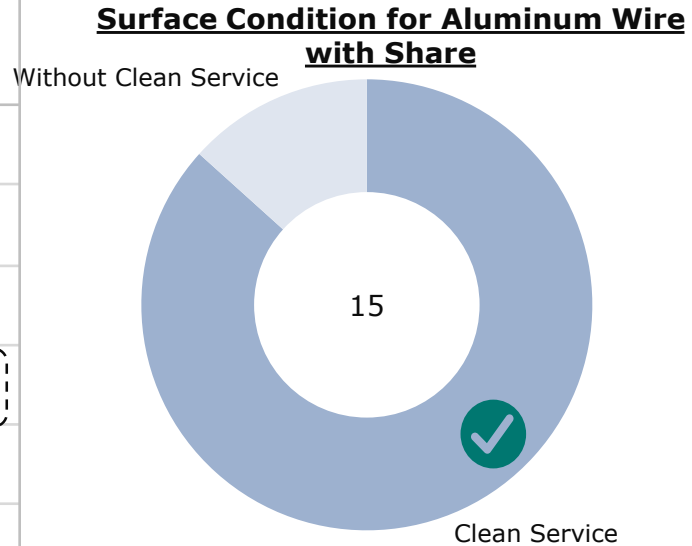


- ✓ Regarding product purity, 36 aluminum wire suppliers can meet the requirement of Al purity  $\geq 99.88\%$ .
- ✓ Regarding product diameter, breaking load, tensile strength, surface condition, only 13 targets suppliers can meet the requirements.

# Target Aluminum Wire Suppliers

## Screening Process for Target Aluminum Wire Suppliers

<u>Diameter (<math>\mu\text{m}</math>) *</u>	<u>No.Companies</u>
above 1,000	4
XX-XX	8
XX-XX	4
XX-XX	15 
Below 200	5
Total	36



- The difficulty of the producing aluminum wire is to balance the diameter and tensile strength. It is hard to decrease the diameter to xxmm-xxmm as the breaking load and tensile strength meet the requirement. 15 aluminum wire suppliers can produce wires with diameter xxum-xxum and required tensile strength, and two of them don't provide aluminum wire clean service. Only 13 aluminum wire suppliers are the qualified producers that can meet both the requirements and provide clean service.
- Aluminum wire suppliers can easily provide products' purity information, diameter information, but it is difficult for them to estimate breaking load data, tensile strength data, surface condition when the customized product is not produced. R&D departments of 13 aluminum wire suppliers indicate that they are technically capable of producing customized products.

Aluminum Fine Wire Picture



Picture was provided by one screened supplier. The number on wire represents the diameter by millimeter.

# Target Aluminum Wire Suppliers Capacity Map, 2022

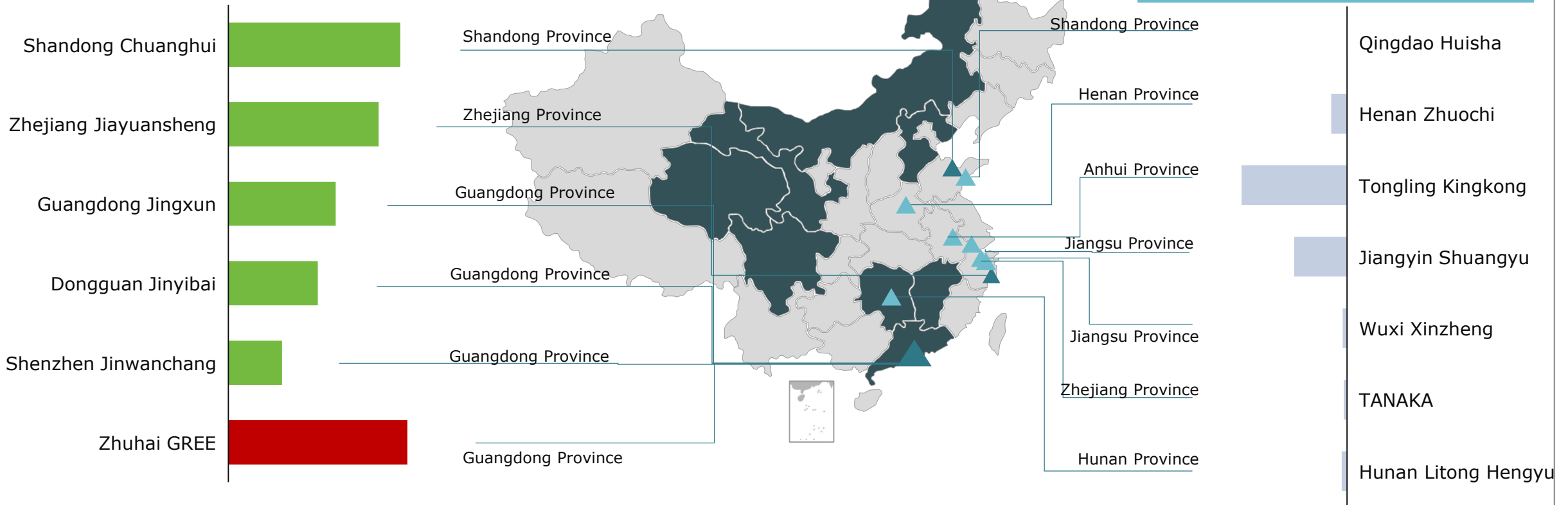
## Target Aluminum Wire Suppliers Capacity Map, 2022

Unit: ton

▲ Available Capacity    ▲ Projected Capacity

### Available Capacity, 2022

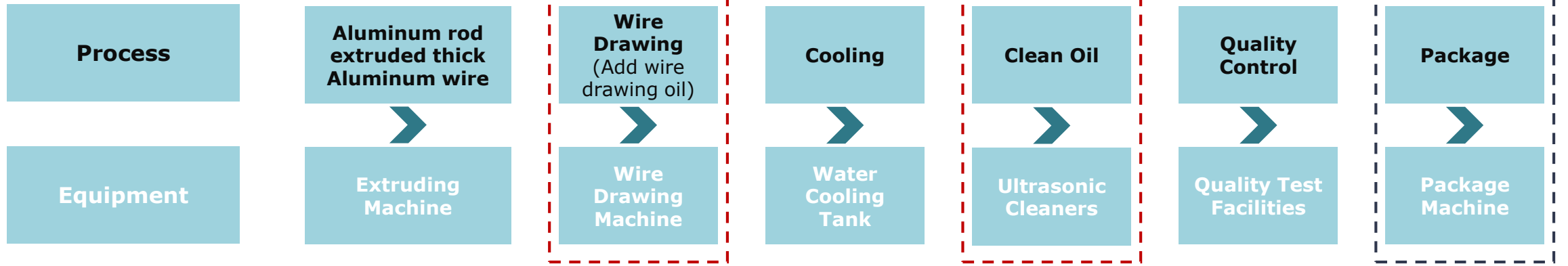
### Projected Capacity



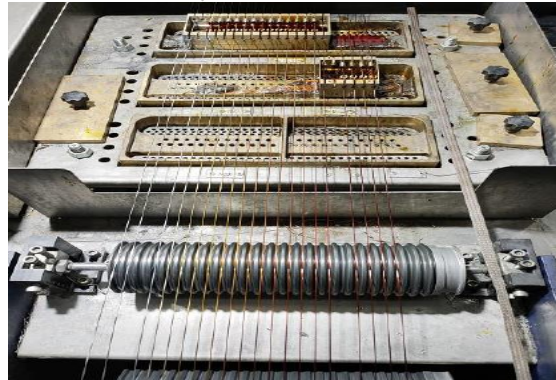
# Aluminum Wire Technology Process Flow

## Aluminum Wire Technology Process

Main Process



Drawing Production Line



Drawing Machine



Ultrasonic Cleaner



The product's packaging could be customized according to spool type and spool weight. The normal aluminum wire is 5-10kg/spool.

# Aluminum Wire Quality Control

## Aluminum Wire Quality Control Equipment

Main Index

Purity Test

Breaking Load Test

Tensile Strength

Surface Condition

Main Equipment

Spectrometer



Breaking Testing Machine



Universal Testing Machine



Microscope



- ✓ Other Equipment: resistance test machine, elongation tester, high and low temperature tester, etc..
- ✓ In order to ensure that the quality of products meets xx requirements, suppliers are able to provide samples for pre-cooperation testing by third parties.

# Aluminum Wire Product Pricing Mechanism

## 1-Fixed Price

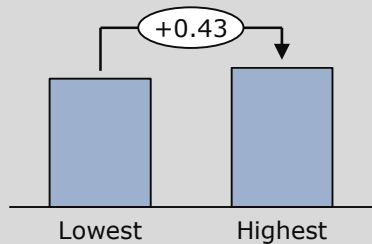
### Pricing Mechanism with Shares



Fixed Price Floating Price

### Fixed Product Price

Product price will not change regardless of the price of aluminum price.



Unit: USD/kg

## 2-Floating Price

### Aluminum Price



### Processing Fee

**Al Purity:**  
(A00)  
...

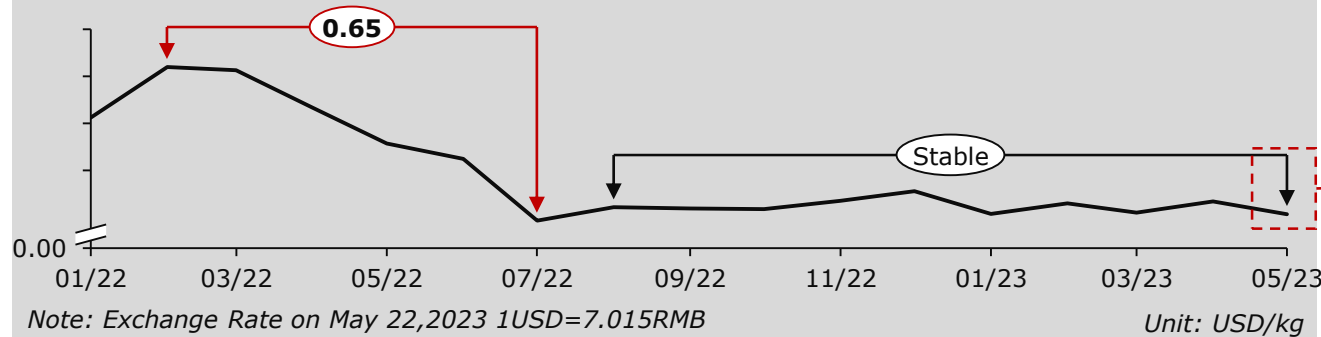
**Pricing Platform:**  
SMM  
SHFE  
LME  
CCMN  
...

**Period:**  
Spot Price or Future Price  
Long-Term Price:  
Monthly Average Price  
Quarterly Average Price  
Short-term Price:  
Daily Average Price  
...

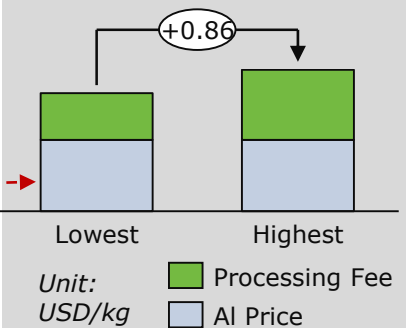
**Currency**  
...

**Production cost:**  
Labor Cost  
Depreciation Cost  
**Package Cost:**  
Plastic  
Aluminum  
**Shipping Fee in China**  
**Tax**  
**Other Fees**

For Example: A00 SMM Monthly Average Price from Jan 2022-May 2023



### Floating Product Price





# Aluminum Wire Trade Pricing Mechanism

## Trade Pricing Mechanism

### Aluminum Wire Product Price

Average xx USD/kg



### China Export Tax Rate for Aluminum Wire

**Policy:**  
Tariff in 2023 xx%

Aluminum wire is high energy consumption product, high pollution and resource product.

**Actually:**  
Temporary Rate xx%

Uncertainty. Sino-US Relation

*Note: In short term, the customs uses temporary export taxes, so there is no tax on aluminum wire currently. In long term, the government may adjust it according to the trade situation every year. Aluminum wire HS code: 76051900*



### Shipping Fee for Aluminum Wire

**FOB**  
Ship to port in China

- ✓ Warehouse Fee
  - ✓ Customs Clearance Fee
  - ✓ Others
- Total FOB: USDxx-xx per declaration

**CIF**  
Ship to port in US

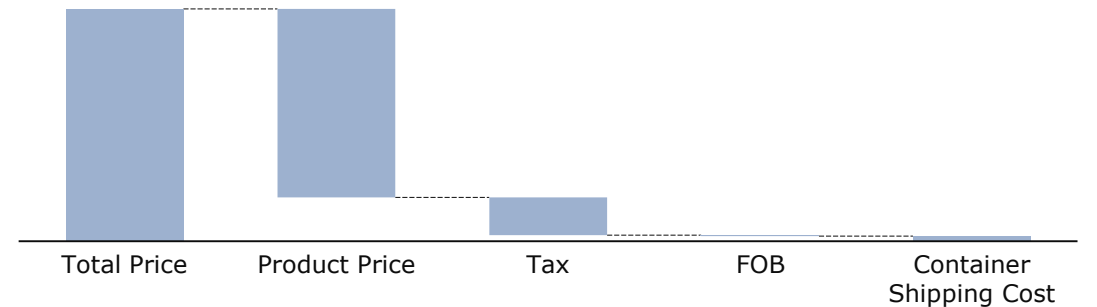
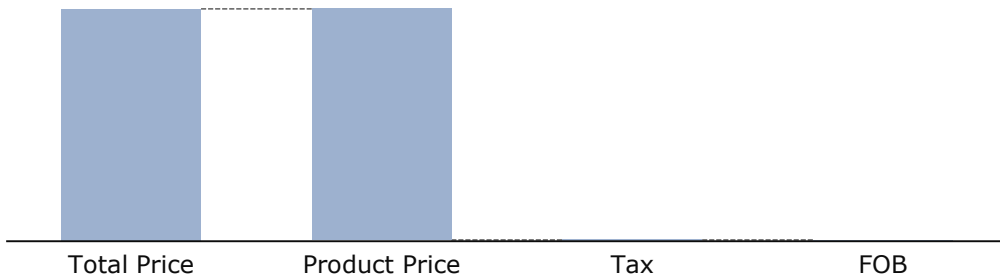
- ✓ FOB + Shipping Cost
- Total Shipping Fee USDxx-xx per container (each 25 tons)

*Note: international container shipping fee will change according to overseas demand, ship turnover rate, port congestion, logistics and other factors.*

### Total Price Without Tax by FOB

### Total Price With Tax by CIF

Unit: USD/kg



*Note: FOB: 700USD per declaration/25,000kg=0.028USD/kg; Shipping Fee: 3,500USD per container/25,000kg=0.14USD/kg*

# Recommend Aluminum Wire Suppliers



### Five Recommend Aluminum Wire Suppliers

Company Name	Product Price		Unit: USD/kg
	AI Price Platform+ Period	Processing	
Company A	xx		0.57
Company B	xx		
Company C	xx		
Company D	xx		
Company E	xx		

✔ The pricing platform and pricing period could be determined by both parties through negotiation.  
✔ The suppliers calculate the processing fee based on 1000 tons of products. If more products are ordered in the future, the processing fee can be lower.

# No.1 Company A

