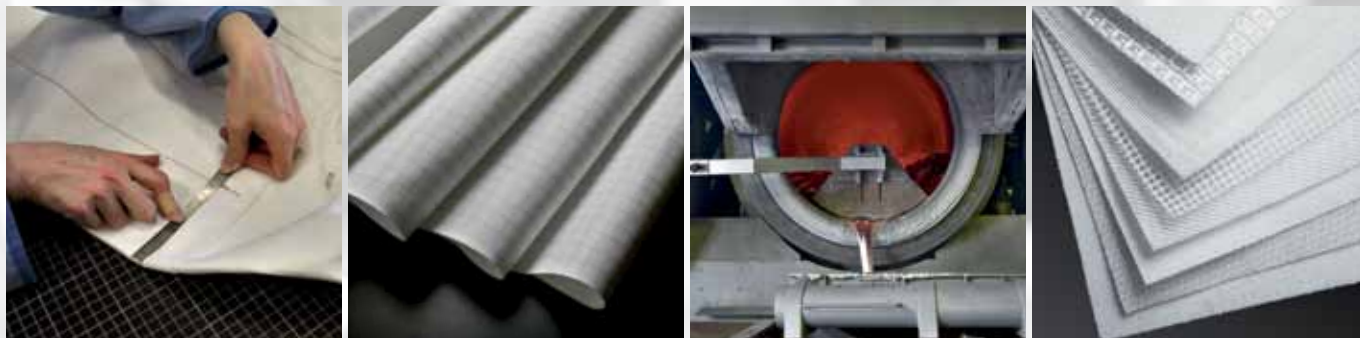


## FILTER MEDIA



## FOR ALUMINIUM INDUSTRY

GAS AND LIQUID FILTRATION

 **testori**<sup>®</sup>  
TESTORI GROUP

## Introduction

Testori enjoys long time experience in supplying **filter bags, cloths, filter media, fluidization fabrics, accessories and services for the aluminum industry**. Testori vertically integrated production guarantees high quality and renown competences in industrial processes and environment protection.

Our products & services are available in the five continents thanks to a capillary presence of Testori Group companies, agents and distributors. **Testori Headquarters (Italy), TTL France, Testori Emirates, Testori USA can all supply the aluminium plants; TTL France, based in Mulhouse, is world leader in the production and sales of multi-channel bags for primary aluminium industry.**

Testori range of products satisfies **alumina production process, primary aluminium smelters** and also **secondary aluminium** foundries. All these processes can require liquid and/or gas filtration.



Aluminium warehouse



Alumina production

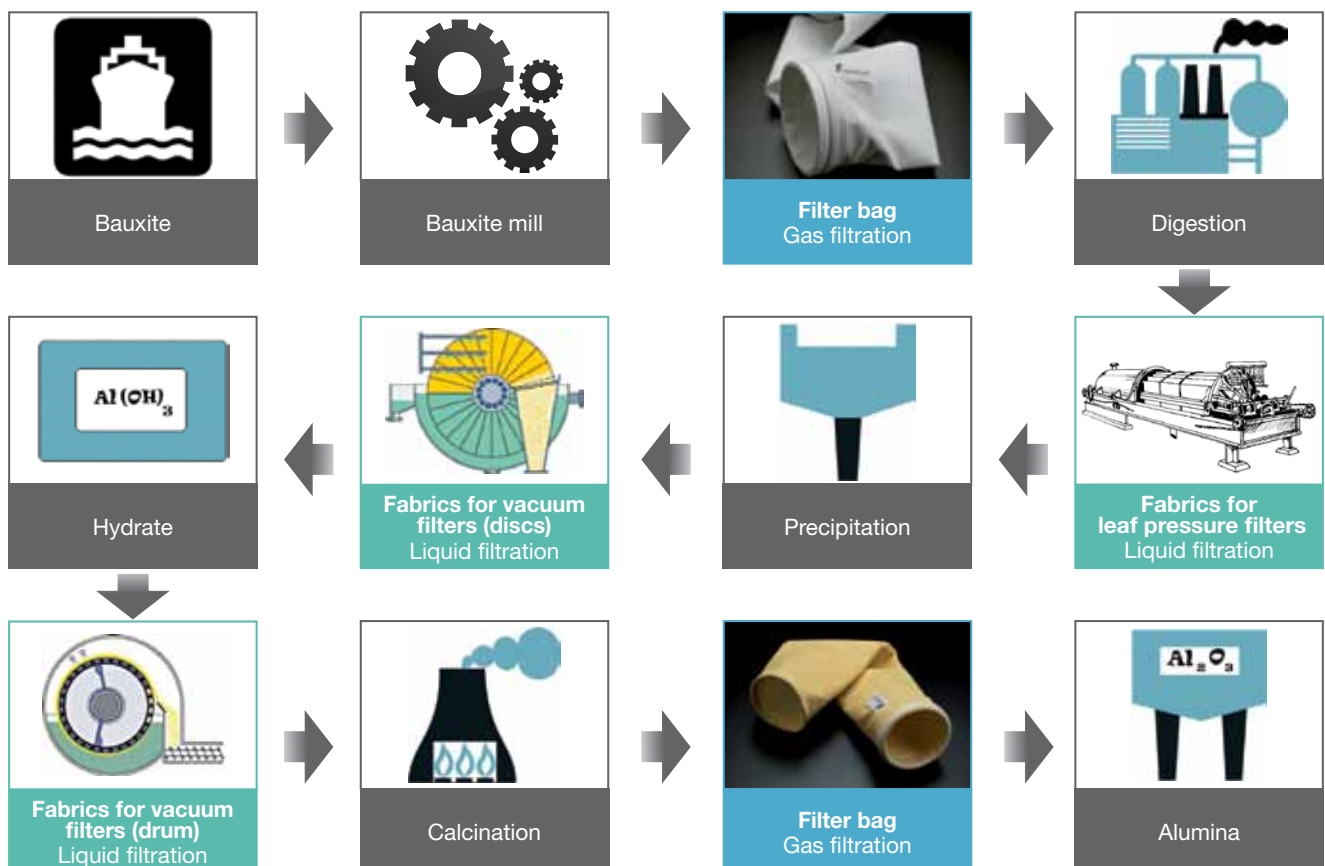


Aluminium production

## FILTER MEDIA FOR ALUMINA PRODUCTION

Our Group supplies filter rolls or finished products (bags and various cloths designs) for any process step involving both solid-gas and solid-liquid separation. The following scheme and table schematize Testori's all-embracing presence in this field with felts (mainly polyester, aramid fibers) and fabrics (mainly polypropylene and polyamide fibers).

### From Bauxite to Alumina





OUR FILTER MEDIA FOR ALUMINA PRODUCTION

Process step	Filtration	Testori solution (fiber)	Testori solution (code)	Filtering requirements
Bauxite mill: crushing & grinding	Solid/gas	PES Felt	T 552 SA	Low emissions
Digesting	Solid/liquid	PP Fabric	P 1826 T	Chemical-mechanical strength
Precipitation/ Liquor clarification		PA Fabric PP Fabric	N 4421 CQ P 9419 TC	High efficiency
Hydrate		PA Fabric	N 4423 CQ	
Calcination	Solid/gas	Meta-aramid Felt	X 551 SA	High temperature resistance
		Polyimide Felt	X 584 SA or X 584 RH	
Red Muds	Solid/liquid	PA Fabric	N 4461 CQ	High velocity



Fabrics



Drum filter



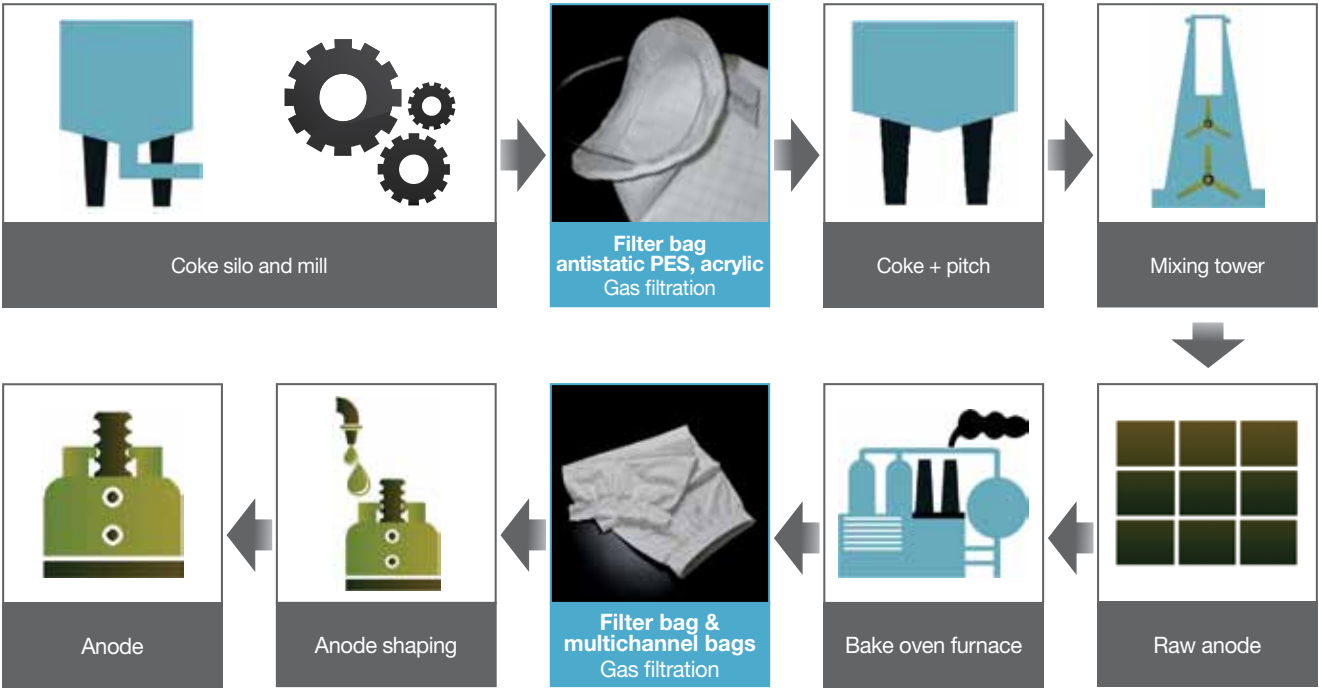
Filter bags

FILTER MEDIA FOR PRIMARY & SECONDARY ALUMINIUM PRODUCTION

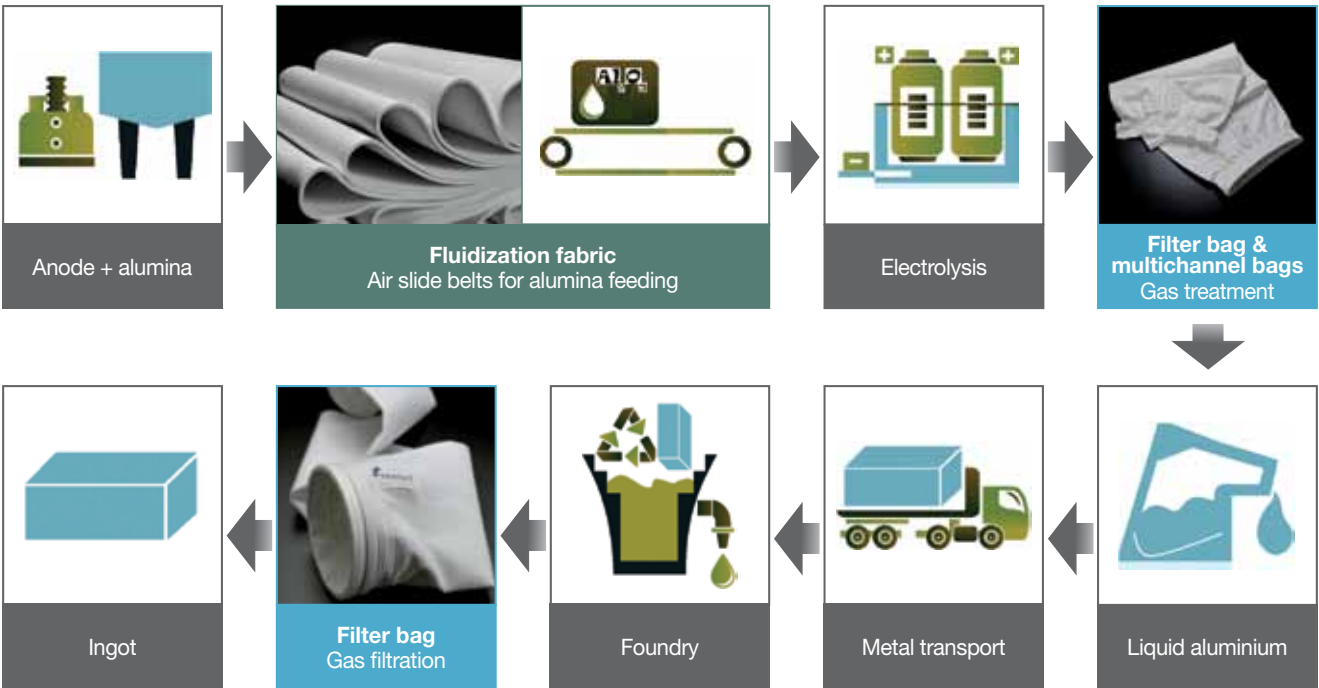
The production scheme presents two main steps: the “black area” (the carbon plant for anodes production) and the **electrolysis** (potlines where alumina is treated to become aluminium). The black area involves two solid-

gas separation steps for our bags and multichannel bags. The electrolysis requires our fluidization fabrics for alumina feeding and our bags for dedusting (both during primary and secondary aluminium production).

Black area - Carbon plant



Electrolysis - Aluminium production



Secondary production

Primary production

Examples of Our product line:

Process step			Filtration	Testori fiber	Testori code	Finished item	Technical requirements
Primary aluminium production	Carbon plant (or black area)	Coke mill-paste plant-pitch fumes	Solid/gas	PES	T 552 KL TW 552 KL	Bags	Chemical resistance
		Anodes baking	Solid/gas	PAN	D 550 RH H 8U47 DY	Multichannel pockets; bags	
	Electrolysis	Alumina feeding	Fluidization	PES	T5	Air slide belts	Mechanical - abrasion resistance
				PES	T10		
				Meta-aramid	X5		
		Reduction cells potlines	Solid/gas	PES	T 556 SA HV40ALU+	Multichannel pockets; bags	Temperature and abrasion resistance
		Cast house	Solid/gas	PES	T 556 SA T 556 KL	Bags	Mechanical resistance
Secondary aluminium production		Foundry	Solid/gas	PES PAN Meta-aramid	T 552 SA D 550 SA X 502 RH	Bags	Mechanical and chemical resistance
		Salt recovery	Solid/liquid	PP	P 6124 CQ	Belts	Mechanical resistance

Our products are customized with specific treatments to guarantee high resistance in different process conditions



Multichannel bag



Antistatic felt



Air slide belt fabric roll

## ACCESSORIES, SPARE PARTS & SERVICES

Testori Group offers its know-how and **experienced team** for:

- installation and replacement of filter bags
- maintenance and inspections on the plant
- leakage tests (with fluorescent inert powder)

We supply accessories and spare parts to guarantee the correct functioning of the equipment:

- Support **cages**: in carbon or stainless steel, pre galvanized, mild steel + cataphoresis coating. Construction in two or three part (for long bags up to 8 m, with special junction, top part with collar or ring and bottom with embossed cap)
- **Venturis**: available in mild steel (treated or not) Vidyne, cast aluminium and stainless steel
- **Electrodynamic probe** for baghouse (TUV approved in according to EN 15859): to allow continuous monitoring of flow rates and dust concentrations. Maintenance costs are significantly reduced

Our internal laboratories have **analytical capabilities** to optimize the filter performance and its maintenance:

- Fiber type identification & chemical tests: to verify process conditions and the powder nature
- Dynamometric test to evaluate mechanical properties
- Granulometric and porometric test
- Permeability and efficiency test (VDI)
- Antistatic properties measurement
- Optical and electronic microscopy tests
- Used bags and pockets analyzes



Bags installation



Multichannel bag production and analysis



Metaramide felt



Laboratories activities



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