

**SEFAR NYTAL®**

**WORKING NYLON**

**WORKING NYLON**

Phuket August 9 2010

10.45-11.00

By Joe Klingler

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# Introduction

## Mills in the past



## Modern mills



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# Introduction



■ PET 1500

- Frame size  
12 x 5 meters
- 13 tons weight

■ Tension +30 N

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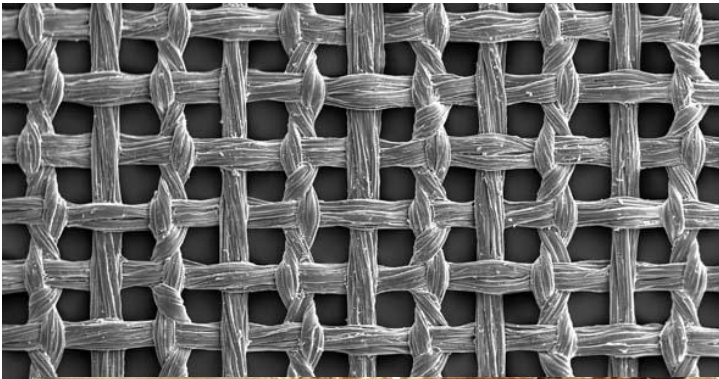
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# History

## Silk

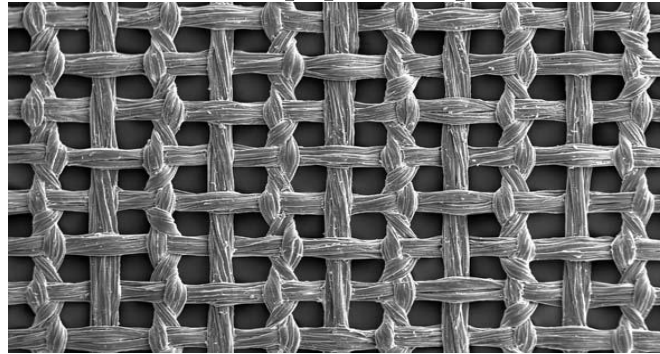


## Disadvantages:

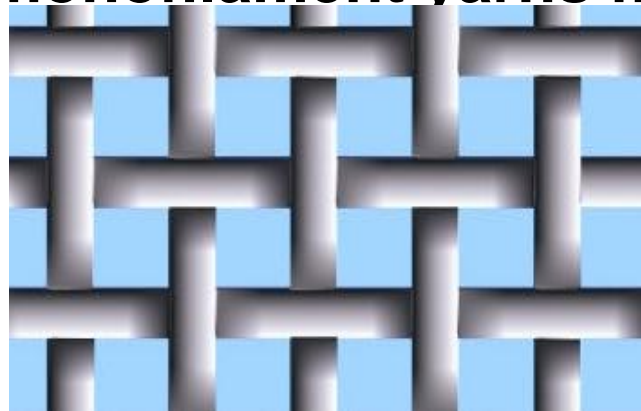
- Raw silk become more and more expensive
- Load on sifter became higher and higher
- Wear and tear of sieves increased also due to cleaners
- Vulnerable to insects and rodents

# History

- Only in 1992 ex-SST stopped production of Dufour Silk



- Early 1950-th our old organizations started to develop fabrics out off monofilament yarns made of Polyamide / Nylon



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# FDA Compliance

## FDA

- PA
- Code of Federal Regulations USA Title 21 Part 177.1500
- PET
- Code of Federal Regulations USA Title 21 Part 177.1630

## EC

- EC Commission Directive 2002/72/EG August 6 2002
- Incl. Amendments up to 2008/39 of the EC Commission

which refers to plastic materials and articles intended to come into contact with foodstuffs

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# Nylon in today's mills

## Sifter

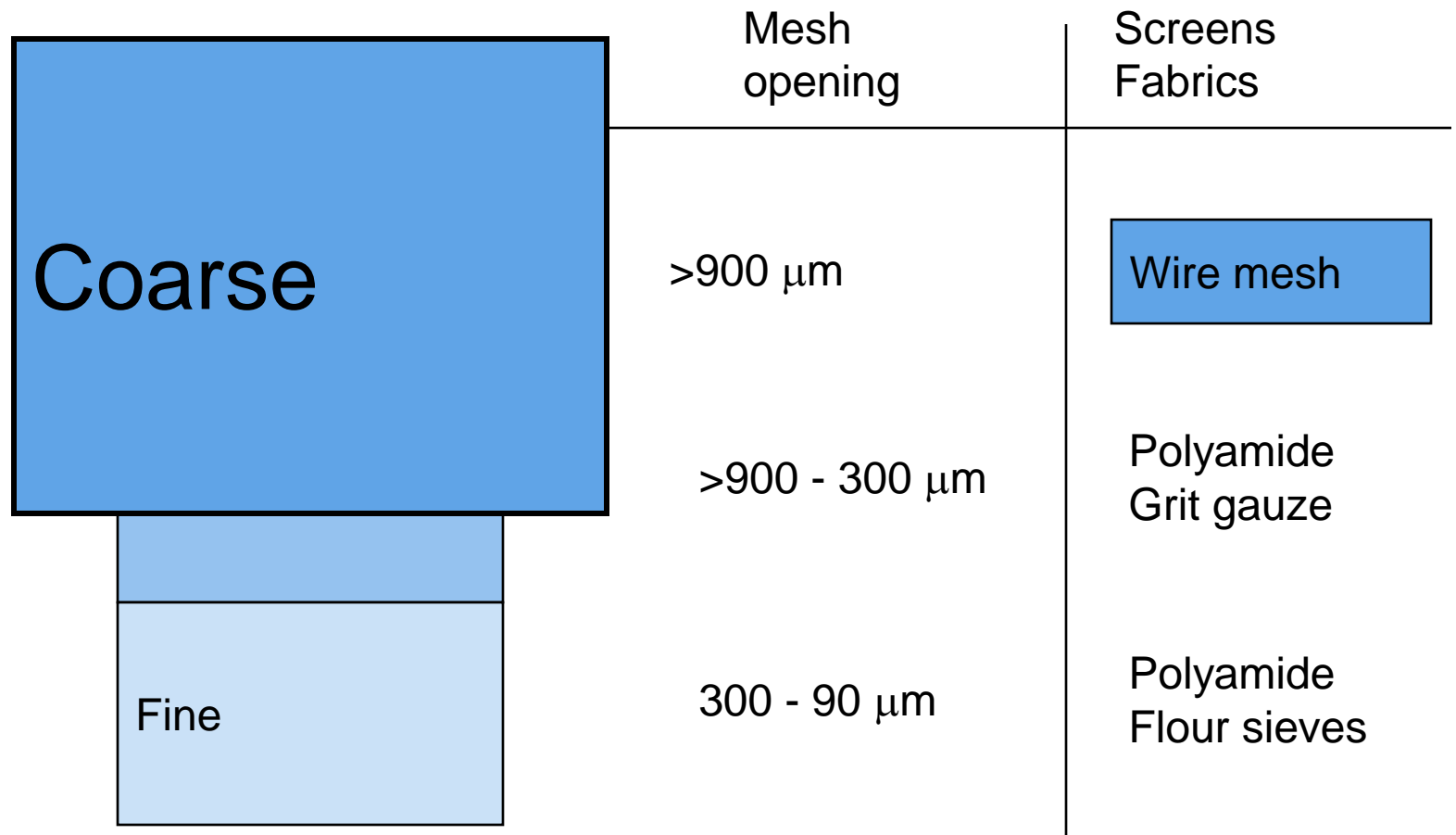


Approx. 50 - 60m<sup>2</sup> of screen fabrics are needed for a 100 t / 24 h Mill

The sieves are renewed approx. once a year

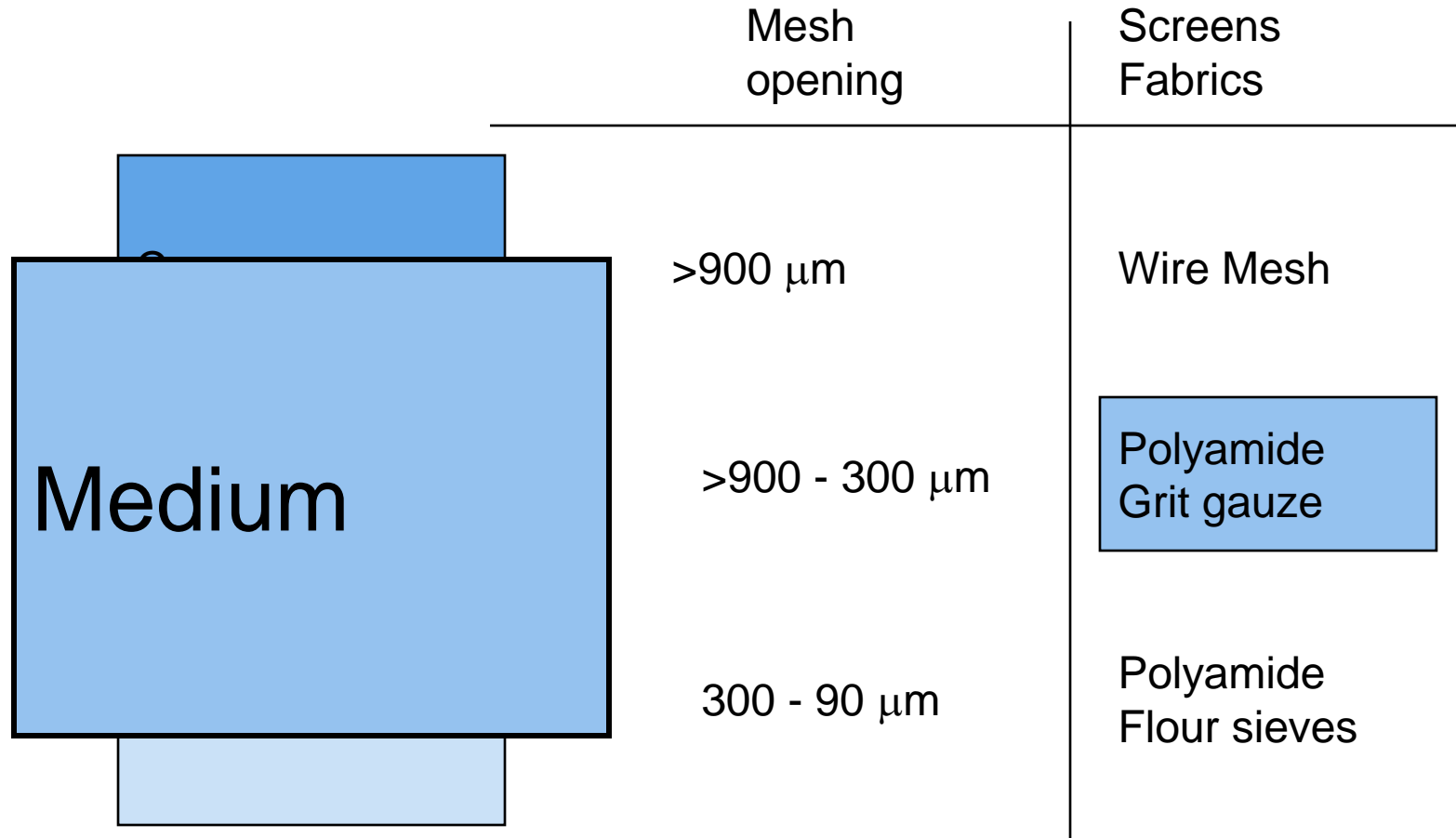
# Nylon in today's mills

## Fabric program - coarse sieves



# Nylon in today's mills

## Fabric program - medium sieves



# Nylon in today's mills

## Fabric program - flour sieves

	Mesh opening	Screens Fabrics
Coarse	>900 $\mu\text{m}$	Wire Mesh
	>900 - 300 $\mu\text{m}$	Polyamide Grit gauze
Fine	300 - 90 $\mu\text{m}$	Polyamide Flour sieves

# Nylon in today's mills

## Pros and cons of Polyamide

### Positive aspects:

- PA is worldwide easy available
- Many producers
- Wide selection to find the right quality of yarn
- Product is well known to the market as bolting cloth

### Negative aspects:

- Elongation while stretching the fabric
- Relaxation of the fabric ( loss of tension)
- Ability to absorb water results in elongation
- Sensitive to temperature changes

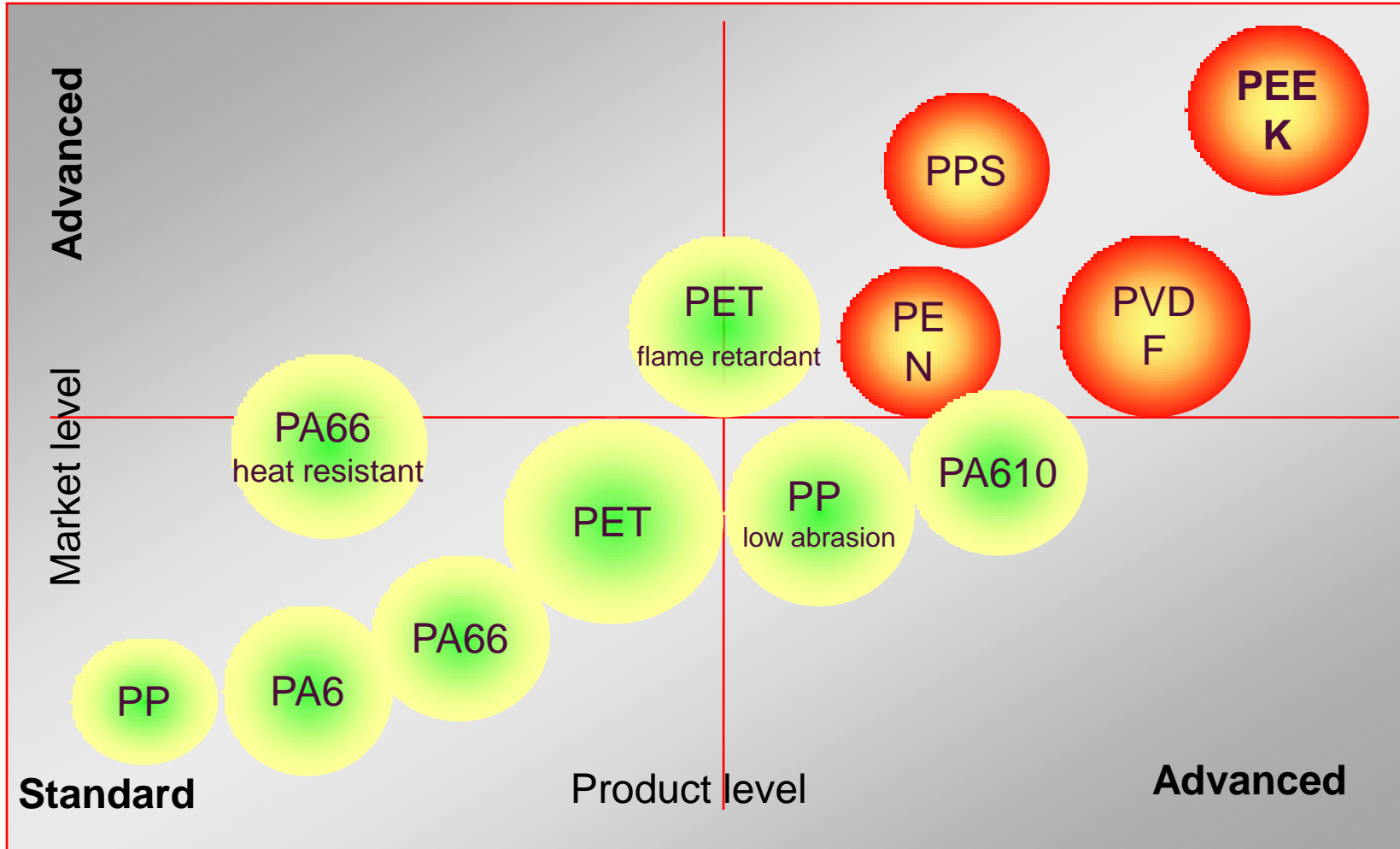
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# Working Nylon

## Polymers for Monofilaments



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# Working Nylon

Tests have been done with PA 6.10, PA11 and PA 12

## Advantage:

- Abrasion resistant, same as PA6 and 6.6
- Low moisture absorption ( which was a negative point with PA6 and 6.6)

## Disadvantages:

- Low availability of yarns
- Up to 20% more expensive
- Still elongation and relaxation

# Working Nylon

Other tests have been conducted with Bi-Component yarns

Core PET, hull made of PA

PET gives low elongation and relaxation not sensitive to water

PA gives the abrasion resistance

Idea was dropped as the adhesion was not up to the requirement.

Other tests have been done in metalizing the PA yarns

Idea was dropped due to high costs of the mesh and non FDA conformity till today for the process.

# Working Nylon

Since one year we are experimenting with Yarns uses by our printing group

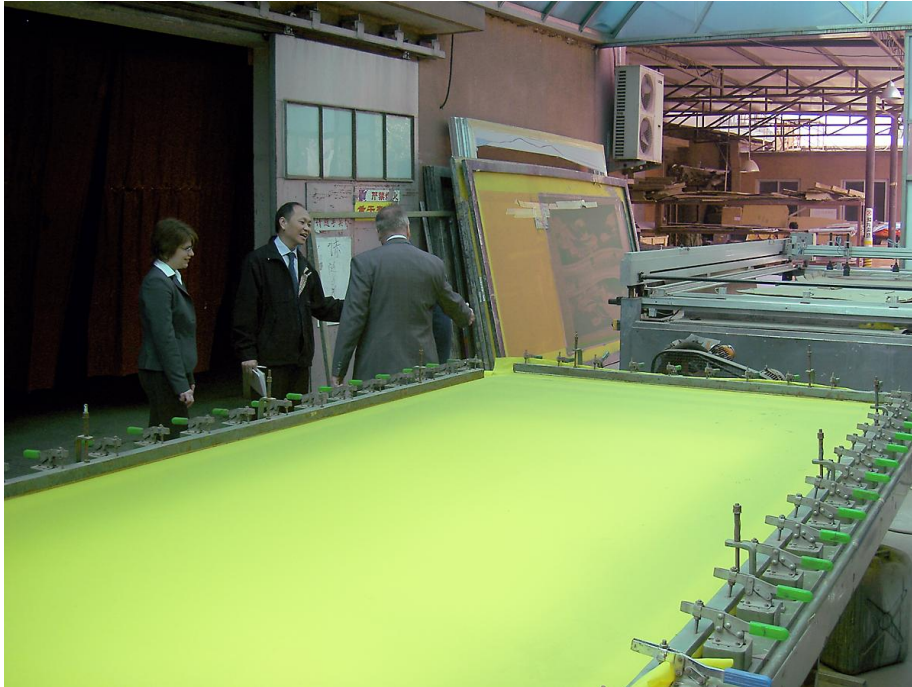
Of course we had first some negative aspects to solve

PET as used in Printing industry is not FDA conform

- Surface treatment of the yarn.
- Finishing of the fabrics.

Requirements to printing mesh are different as in the milling industry

# Working Nylon becomes PET 1500



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# Conclusion

This product range may be used in :

- Mills which run mainly soft and medium hard wheat
- Mills which have lots of troubles due to high fluctuation in humidity.
- Mills who have a lot of tension drop after screening

# Conclusion

**What is available at the start?**

**Main 8 numbers of fabric in the Milling Forte range**

V-PET-7MF-200	3A07-0200-158-01
V-PET-8MF-180	3A07-0180-158-01
V-PET-9MF-150	3A07-0150-158-01
V-PET-9 1/2-140	3A07-0140-158-01
V-PET-10MF-132	3A07-0132-158-01
V-PET-10 1/2MF-125	3A07-0125-158-01
V-PET-11MF-118	3A07-0118-158-01
V-PET-12MF-112	3A07-0112-158-01

**More will follow as demand increases**

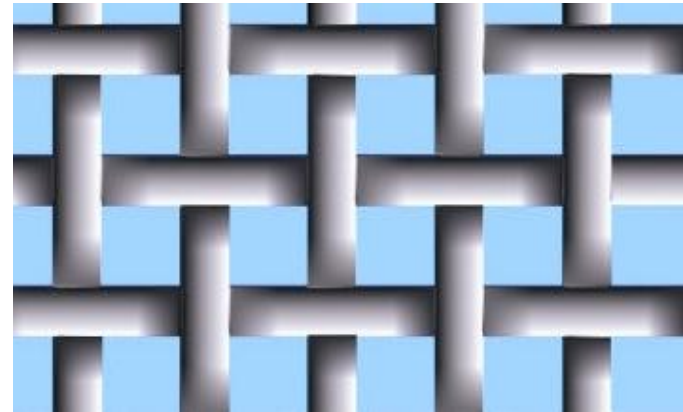
# Conclusion for PET 1500

## Advantage

- Known mesh quality made of high modular PET
- Availability can be build up fast if interest is there
- Same capacity in sifting
- No loss in tension due to relaxation and humidity changes

## Disadvantage

- slightly higher abrasion mainly due to cleaners
- For the start only in 158 cm available



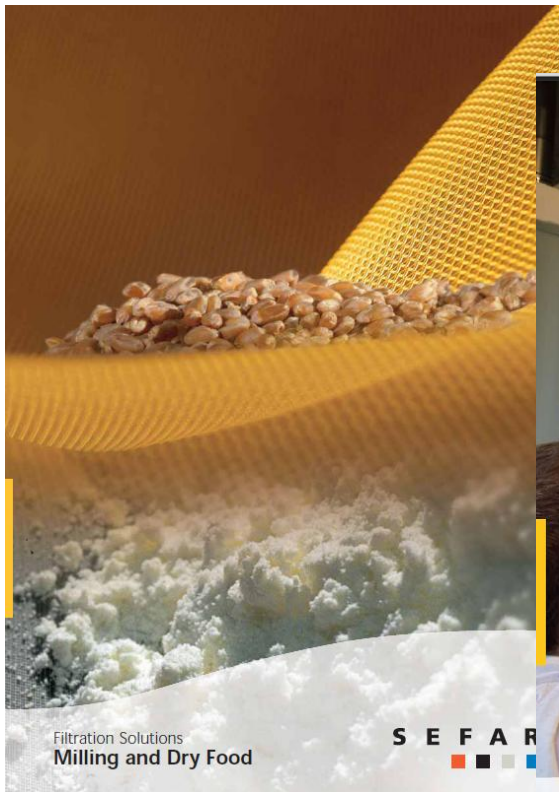
# The ideal combination ...

... is the  
**SEFAR**  
solution



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# Brochures on the internet



Please consult our website: [www.sefar.com](http://www.sefar.com)



**Thank you  
for your attention!**

**Are there any  
questions ?**