

## SUSTAINABLE PRODUCTS

ALIGNED TO GLOBAL MEGATRENDS



Significant growth potential...

















FASTER PROCESSING











- SUPPORT CO2 REDUCTION
  - Typical weight-saving of 60-70% vs metal applications
- FASTER PROCESSING
  - Cycle times and recyclability
- CLINICAL BENEFIT
  - Non-metal solutions



RESISTANCE & DURABILITY

# A NEW SUSTAINABILITY VISION

#### **ACHIEVE CARBON NET ZERO:**

- INCREASE THE USE OF OUR SUSTAINABLE & RECYCLABLE PRODUCTS WHICH SUPPORT CO<sub>2</sub> REMOVAL
  - MINIMISE RESOURCES (CARBON, WASTE AND WATER) USED IN OUR OPERATIONS

#### **SUSTAINABILITY PILLARS**

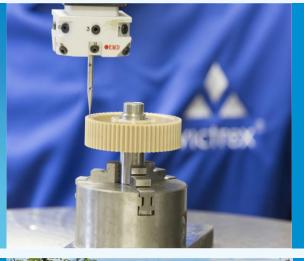
## 12 RESPONSIBLE CONSUMPTION AND PRODUCTION







SUSTAINABLE SOLUTIONS AND RESOURCE EFFICIENCY



#### **2030 GOALS**

#### **ACHIEVE NET ZERO CARBON EMISSIONS**

by 2030 in our own operations 1

**INCREASE RECYCLING RATES** of PEEK/PAEK in the supply chain

<u>INCREASE REVENUE</u> from our sustainable products with positive environmental & social benefits<sup>4</sup> (currently c40%)

**SUSTAINED REDUCTION IN RESOURCES** (carbon, waste and water) per tonne by 2030

#### **MILESTONE TARGETS**

VICTREX USING 100% RENEWABLE ELECTRICITY WITHIN 3 YEARS <sup>2</sup>

**DOUBLE RECYCLING RATES** in the supply chain by 2025

**EXCEED 50% OF GROUP REVENUE** from sustainable products with environmental & social benefits by 2025

COMMITMENT TO A SCIENCE BASED EMISSIONS TARGET 3 BY 2022



SUSTAINABLE DEVELOPMENT GOALS

Z









SOCIAL RESPONSIBILITY



DELIVER A ZERO ACCIDENT AND INCIDENT CULTURE

**GROW** global STEM programme

INCREASE COMMUNITY ACTIVITY across our global locations

**FOCUS** on enhancing gender equality/Diversity and Inclusion

IMPROVED SAFETY METRICS, BASED ON OSHA STANDARD

**STEM AMBASSADORS** in every region

<u>COMMIT >500 EMPLOYEE HOURS</u> to global community activity annually

EMBED INCLUSION AND DIVERSITY across global employee base



#### **ENVIRONMENTAL BENEFITS**

#### STRONG MEGATRENDS POST COVID

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ACCELERATING PLANE REPLACEMENT



Make planes FASTER

**Light Weight** 

**Make planes LIGHTER** 

**Processing benefits** 

**CARBON NEUTRAL** 

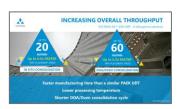


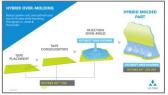
**COST PRESSURE** 

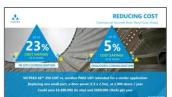


Recyclability Make TPC parts









#### **ENVIRONMENTAL BENEFITS OF PEEK**

#### PEEK SUPPORTS CO2 REDUCTION

• 10kg weight reduction supports c4 tonne CO2 saving per plane per year\*

(\*IATA Carbon reduction and climate change May 2018)

 Current PEEK content on widebody model (eg Airbus A350) could save >250 tonnes of CO2 per plane, per year vs using metal



**Striving for Recyclable/Sustainable solutions** 





### ACCELERATING THE REDUCTION OF CO<sub>2</sub> EMISSIONS IN THE SKY

IN THE POST COVID WORLD

37,000+

new planes to enter service by 2037

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76%

of the new planes to enter service are single-aisle planes for short-mid haul flights<sup>2</sup>

60% LIGHTER

Unlike the B787 and A350s,

Single-aisle planes are made mostly out of METAL<sup>3</sup>

PEEK composites can replace metal parts and be up to 60% lighter with higher specific strength<sup>6</sup>

VICTREX AEROSPACE

SOLUTIONS

1.9 M TONNES CO<sub>2</sub> SAVED with VICTREX PEEK solutions so far (2003 -)

of all new single-aisle planes

with PEEK composites?

50M

TONNE

Potential saving of 50 million tonnes of CO<sub>2</sub>\* in 15 years if all of these new single-aisle planes could be made from 50% PEEK composites<sup>4</sup>

Approx 2% of CORSIA requirement



2.6 billion CO₂ reduction required in the aviation industry by CORSIA\* between 2021 -2035<sup>5</sup>

\*Carbon Offsetting and Reduction



VICTREX IS PART OF THE
CLEAN SKY 2 PROGRAM,
PARTNERING WITH MAJOR
AIRFRAMER TO CO-DEVELOP
LARGE PRIMARY/SECONDARY
STRUCTURE WITH PEEK
COMPOSITES.



#### MINUTES VS. HOURS\*

PEEK composites also speeds-up the parts manufacturing process helping airframers reduce backlogs<sup>7</sup>

Thermoplastics vs. Thermoset annealing process time

## ECONOMY PASSENGER NAME DOEJJOHN, MR. FROM LONDON TO MANCHESTER FULHT CLASS DATE TIME PRO13 Y 18JUL 05:30 FLIGHT SQUARD FUL PRO13 05:00 SEAT

BAG 1PCS21KG

28A

HAVE A NICE TRIP!



#### References

- 1,2 Airbus Forecast 2019
- 3 About 85-95%, source:
- https://www.intechopen.com/books/aerospace-engineering/the-evolution-of-the-composite-fuselage-a-manufacturing-perspective
- 4 Based on Victrex calculation, details can be provided upon reques
- 5 IATA Fact Sheet "Climate Change & CORSIA" May 2018