



IBS

JUD

James Ross

BERGER

JAKOB

DEWATERING SYSTEMS



PAPER IN MOTION

IBS PAPER
PERFORMANCE
GROUP

GLOBAL COMPETENCE

At the IBS Paper Performance Group, a comprehensive understanding of the paper manufacturing process guarantees proven solutions that will stand the test of time.

The synergies from different areas and the shared knowledge of technical details in papermaking result in the efficient and smoothly functioning interaction of technologies developed by the IBS Paper Performance Group.

From a "Turn Key" solution to technically detailed, comprehensive solutions, we offer a unique spectrum of products and services tailored to the paper industry. With our many well-proven products, it is our intention to contribute our part to the development of the paper industry. Dedication to R&D and the solutions that result provide unrivaled benefits for our customers.

Your requirements guide our efforts and are the focus of our mission. That is where you need us most. With twelve locations worldwide and a global service network, we provide you with the responsiveness necessary for a perfectly operating paper production process.

We offer you

- a unique spectrum of products and system solutions
- advanced thinking and patented ideas
- safety through well organized service structures
- highest competence relative to energy and ecological issues
- global network of strategically located facilities
- the known reliability and experience of IBS Paper Performance Group



DEWATERING TECHNOLOGY

A substantial part of the papermaking process relies on dewatering technology. This impacts quality, as well as, productivity. Over several decades, the IBS Paper Performance Group has continuously reinforced its position as the leader in this technology through the development of new products and materials.

Starting with ceramics of outstanding quality and using proprietary processing technologies to achieve the highest level of perfection and precision, IBS consistently exceeds its customer's expectations. To maintain its leading role in optimizing the paper making process, IBS has employed professionals who utilize our sophisticated laboratories to extend their expertise and bring advanced knowledge to our customers. IBS is dedicated to the improvement of efficiency in the papermaking process by making it both safer and more user friendly.



THE PERFORMANCE SPECTRUM

The IBS Paper Performance Group has evolved into an "All-In-One" partner for the Pulp and Paper industry. Its expertise now extends from product development to precision manufacturing, as well as, equipment installation and services.

Engineering

- +** decades of experiences in papermaking
- +** providing the highest level of competence, knowledge and skill

From many years of close cooperation with the Pulp and Paper industry, IBS has developed a solid knowledge of the many challenges inherent in the papermaking process. Applying advanced knowledge, and utilizing the most modern equipment, the IBS Paper Performance Group is able to deliver practical innovative solutions time-after-time.

Production

- +** advanced manufacturing processes
- +** experienced, competent and motivated employees
- +** proven experience with tailor-made products

Highest quality and precise techniques are key requirements at our production facilities. In addition, innovations in manufacturing are the factors, which set our products apart from the rest.

Installation

- +** global presence
- +** flexibility and know-how

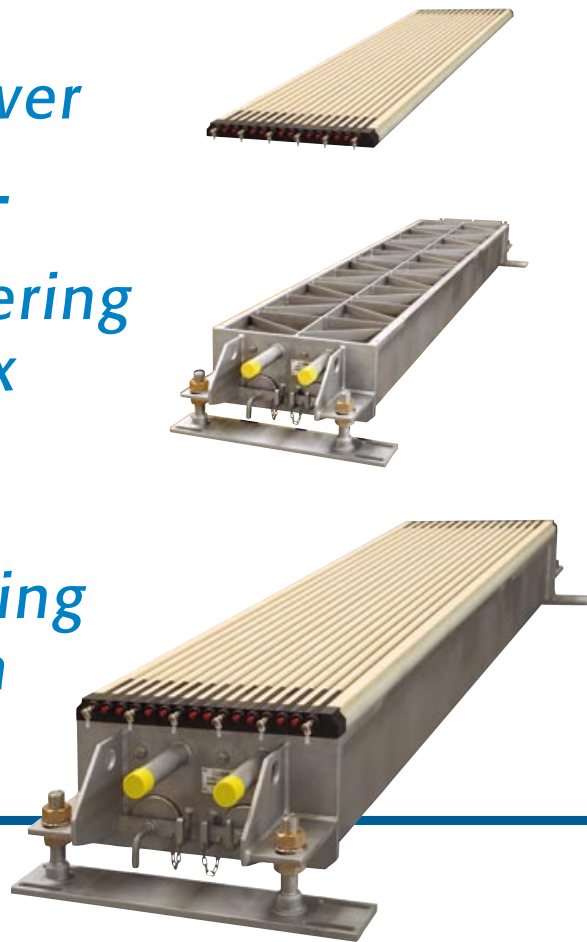
As an "All-In-One" partner we support you whenever and wherever you need us. Whether it is the integration of new technologies in specific applications or the installation of a "Turn Key" solution.

Service and Optimization

- +** highly trained technicians
- +** unbureaucratic procedures

The ability to recognize and solve problems in the papermaking process has made us a recognized partner, globally. Our "After The Sales Services" are an important part of our success. Mobile service teams, utilizing modern service equipment, travel worldwide to help with maintenance and optimization on-site whenever you need them. These services help you save time, thus increasing productivity.

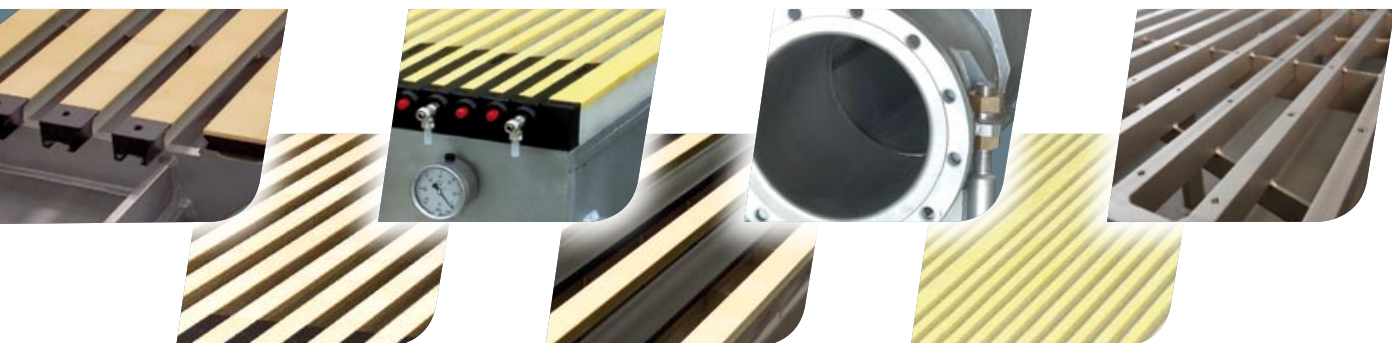
Cover
+
Dewatering
Box
=
Dewatering
System



DEWATERING SYSTEMS

In addition to proper ceramic surfaces, the technical implementation of correctly designed dewatering systems are important for obtaining the highest level of productivity.

Through years of experience in meeting the production requirements of well-known paper manufacturers, IBS Paper Performance Group has developed proven products, which were originally "tailor-made" solutions. These proven products were perfected and manufactured in a small series. From these experiences derived a broad spectrum of basic drainage elements, which now are operating successfully in large numbers all over the world. With their outstanding price-performance ratio, the IBS range of products can be utilized and optimized as a perfect foundation for achieving your special requirements.



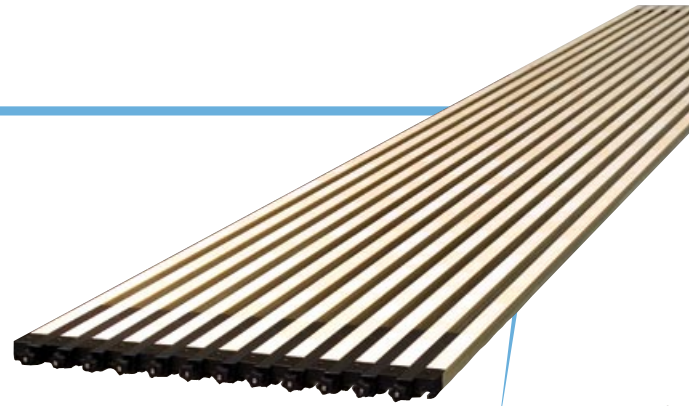
CERAMIC MATERIAL QUALITIES

In modern paper making ceramic dewatering elements play a significant role relative to quality and efficiency. The IBS Paper Performance Group has a unique spectrum of high-grade ceramic covers with specific materials for every conceivable application.

AL-OXIDE

- + high wear resistance
- + excellent efficiency
- + longevity due to highest purity

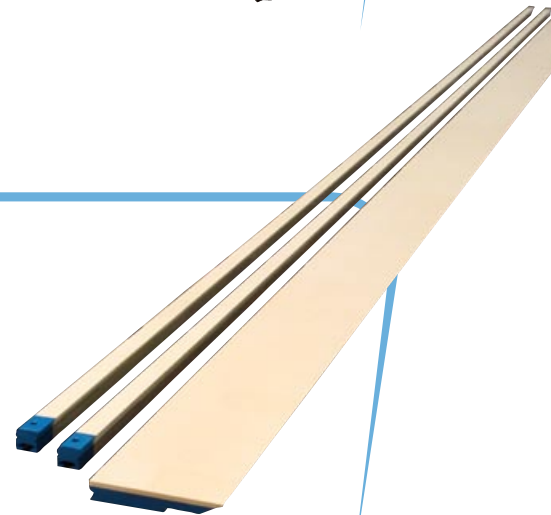
This proven ceramic yields a high level of efficiency and safety for paper production of up to 1000 m/min (3000 ft/min). With its known IBS surface quality, a strong edge toughness and low surface porosity, it has been the basic standard ceramic for decades in the Pulp and Paper Industry.



ZTA

- + improved thermal shock resistance up to 170° C (338° F)
- + for paper products with abrasive fillers
- + high edge toughness

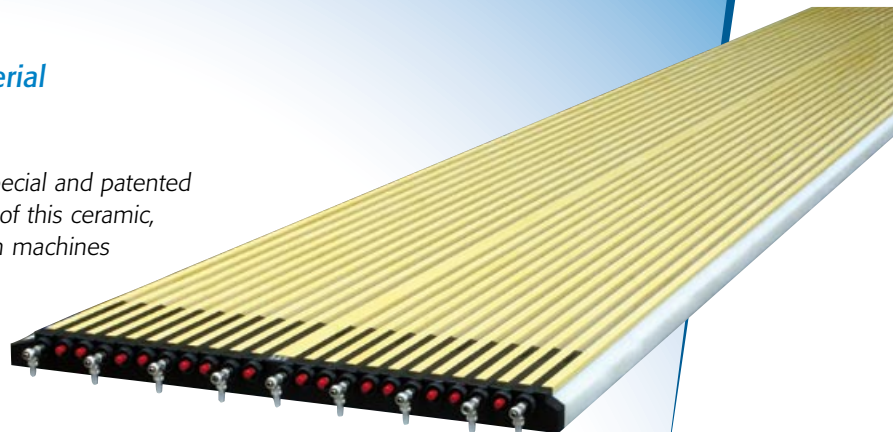
A very low surface porosity combined with an improved thermal shock resistance is an optimal choice for producing products with highly abrasive fillers.



ZR-OXIDE

- + highest fracture toughness
- + best surface quality
- + excellent mechanical strength
- + worldwide unique and patented material
- + gentle on wires and felts

Top ceramic properties are achieved through a special and patented sintering process. The superior surface properties of this ceramic, with its very low residual porosity, allows for use in machines with speeds up to 1500 m/min (4900 ft/min). Even with little water lubrication, safe operation with reduced drive load can be achieved.



SI-NITRIDE

- +** excellent surface properties
- +** highest mechanical strength
- +** thermal shock resistant up to 600° C (1112° F)
- +** extremely low residual porosity

Consistent optimization and innovative input improves even excellent materials.

SI-NITRIDE is one example of a ceramic with an unmatched thermal shock resistance of up to 600° C, an extremely low residual porosity, excellent surface properties and edge toughness combined with unsurpassed mechanical strength.

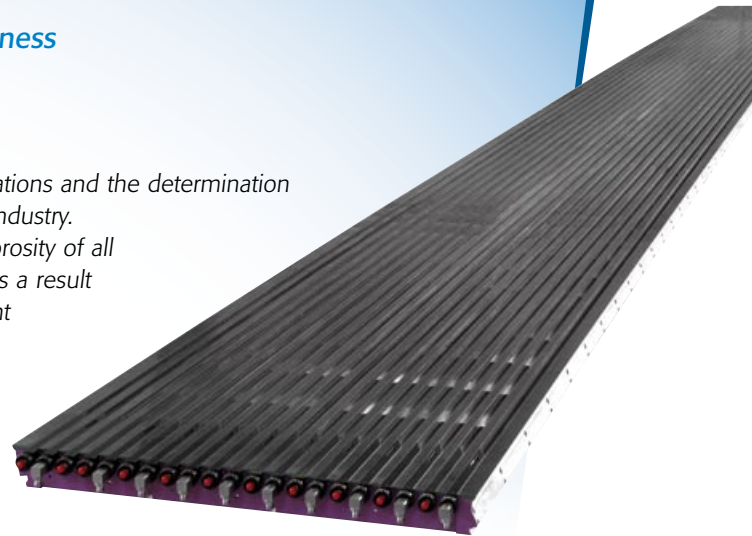


SI-CARBIDE

- +** application on world record machines
- +** unique, patented liquid-phase sintering process
- +** highest wear resistance through maximum hardness
- +** lowest residual porosity of all ceramics
- +** long term consistent dewatering geometries

With this ceramic material, IBS demonstrates its spirit for innovations and the determination to continuously provide advancements for the Pulp and Paper industry. This extraordinary product, which features the lowest residual porosity of all ceramics, was developed for the most demanding applications as a result of intensive research. With its maximum wear resistance, excellent surface qualities and outstanding thermal stability, unmatched service life can be achieved, even with abrasive fillers.

By adding this ceramic to its range of products the IBS Paper Performance Group has set a milestone in achieving near maintenance free and efficient paper production capabilities.



IBS-Ceramic Selection Criteria

	AL-OXIDE	ZTA	ZR-OXIDE	SI-NITRIDE	SI-CARBIDE
Wear Resistance	+++	++++	++	+++	+++++
Thermal Shock Res.	++	+++	++++	+++++	++++
Surface Quality	++	+++	++++	+++++	+++++
Porosity	++	+++	+++	++++	++++
Edge Toughness	+++	++	+++++	+++++	++++

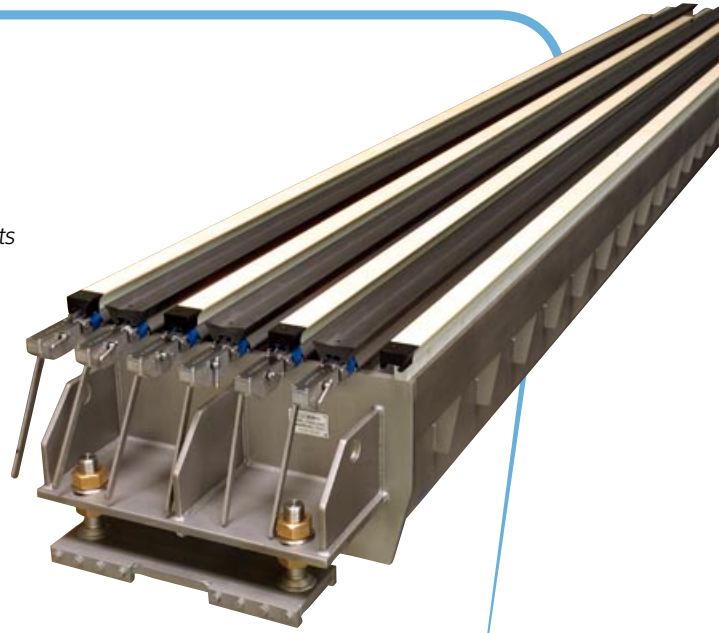
SPECIAL ELEMENTS

Hydroline™ Boxes

- + suitable for all paper grades + speeds
- + optimization on running machines
- + optimum paper quality

The Hydroline™ concept, with its design and technical finesse, sets a new level in dewatering elements and is especially suitable for papermakers producing a broad range of paper grades.

Applicable for each grade and speed, the Hydroline™ dewatering box yields a better paper quality. The adjustable drainage characteristics guarantees quick and time saving grade changes during operation, ensuring optimum output.



Varioline™ Boxes

- + optimization of stock activity during operation
- + paper quality and formation infinitely controllable
- + integration into your DCS possible

The fully evolved technology of the Varioline Plus™ allows for fine-tuning of the drainage characteristics and activity levels during a normal machine run.

Besides manual adjustability, an integration into the machine's DCS is also an option.

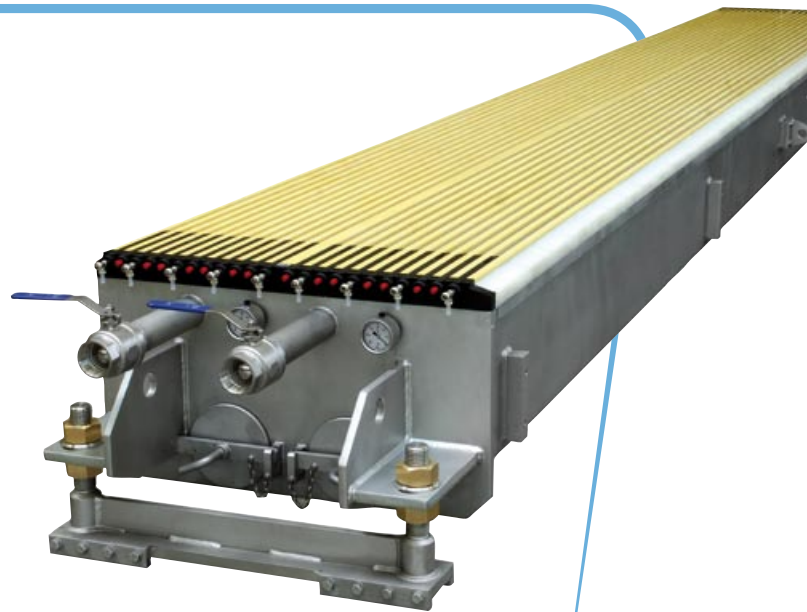


Multi-Chamber Boxes

- +** high drainage characteristics
- +** reduced energy consumption
- +** fast amortization

These multi-chamber boxes are designed for highest drainage performance.

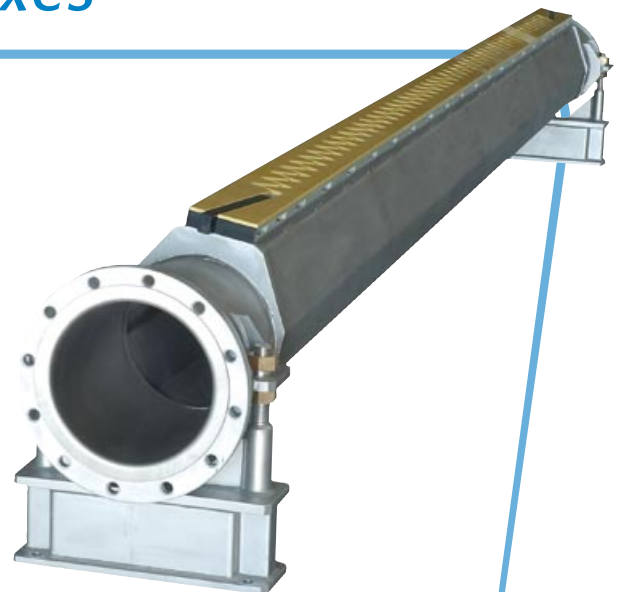
Due to reduced energy requirements the initial purchase expenses are quickly amortized and justify the replacement of existing equipment.



Zig-Zag™ Felt Suction Boxes

- +** unique design
- +** efficient drainage
- +** reduced energy consumption
- +** prolonged felt life

The special design and construction of IBS Zig-Zag™ boxes, along with the unique ceramic contour, yields efficient and energy saving drainage. The reduced drive requirements also contribute to extended felt life. Improved felt cleaning minimizes the need for essential chemicals, which also, reduces the overall operating cost.



The IBS Paper Performance Group offers a variety of standard dewatering elements or, upon request, can design and build specifically for your applications and requirements.

EVA Electronic VAcuum Control System

- + highest operational safety
- + maintenance free operation
- + highest accuracy of vacuum control
- + assures consistent dewatering conditions

The Electronic Vacuum control system from IBS is a well proven control unit with self cleaning valve components. Several different valve sizes are available, which are adaptable to your specific needs, guaranteeing consistent production conditions.



ACCESSORIES AND COMPONENTS

Angle and Height adjustable T-Bars

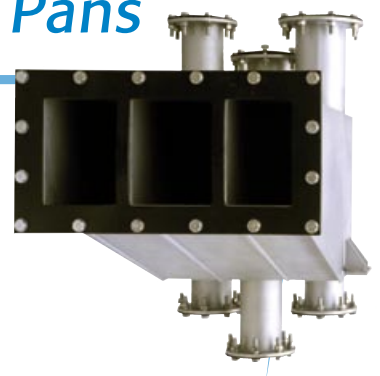
- + precise adjustment while machine is running
- + ideal for frequent grade changes

A precise adjustment of weight and paper grade "on the fly" allows for shorter downtime.



Water Separators, Headers & Wire Pans

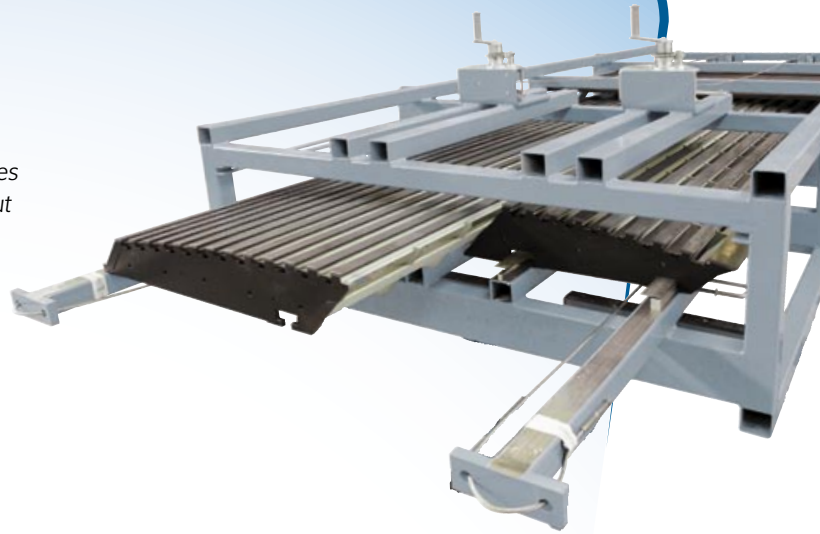
As a "Full-Service Partner" IBS designs the specifications for your water separator including the piping and more.



Installation and Transportation Frames

- +** reduces expensive installation time
- +** minimizes required man power
- +** increases safety

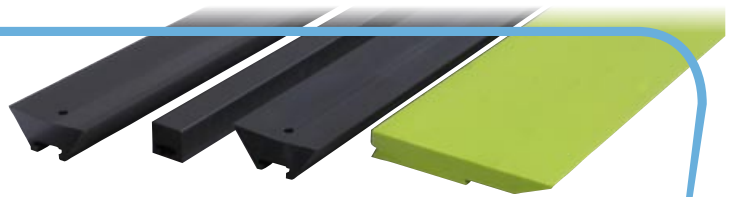
Specially designed "installation and transportation" frames optimize the installation process. Consequently, your shut down schedule - along with necessary man-power - can be reduced. Customer specific solutions for different designs and materials are available.



Polyethylene Blades and Covers

- +** virtually any design in shortest possible time
- +** comprehensive HDPE material choices

PE properties for any application, plus the guaranteed assurance that comes with years of experience with all types of covers and blades.



Temperature Sensors

- +** accurate temperature monitoring
- +** telemetry by IBS available

With accurate measuring points achieved by our thermo elements, an exact temperature control of the ceramic surface of any dewatering element is possible. IBS Paper Performance Group also offers Temperature Telemetry with fault analysis.



1 IBS Austria GmbH

8833 Teufenbach 63
Austria • Europe
Phone: +43 3582 8511-0
Fax: +43 3582 8511-31
E-Mail: office@ibs-austria.com

2 Maschinenfabrik Berger GmbH

Wienerstrasse 35
8720 Knittelfeld
Austria • Europe
Phone: +43 3512 82 442
Fax: +43 3512 82 442-99
E-Mail: info@maschinen-berger.at

3 JUD AG Papiermaschinen

Industriering 15
9491 Ruggell
Liechtenstein • Europe
Phone: +423 375 82 82
Fax: +423 375 82 99
E-Mail: info@jud.li

4 IBS Austria GmbH
Service Center Finland

Sahantie 10, 46860 Anjalankoski
Finland • Europe
Phone: +358 5 360 3300
Fax: +358 5 360 3306
E-Mail: service@ibs-finland.com

5 IBS Of America Corporation

3732 Proffitt Way
Chesapeake, VA 23323 • USA
Phone: +1 757-485-4210
Fax: +1 757-487-0965
Toll Free: 888-IBS-6228
E-Mail: office@ibs-america.com

6 JUD Corporation

3732 Proffitt Way
Chesapeake, VA 23323 • USA
Phone: +1 757-485-4371
Fax: +1 757-485-4473
E-Mail: sales@judcorp.com

7 James Ross Limited

4503 Rowsome Rd. East
Elizabethtown
Ontario • Canada K6T 1A9
Phone: +1 613 342-7734
Fax: +1 613 342-8439
E-Mail: service@jamesross.com

8 IBS Asia
Pulp & Paper Technology Pte. Ltd.

70A Neil Road
Singapore 088837
Phone: +65 6 324 6990
Fax: +65 6 324 6991
E-Mail: ibsasia@ibs-ppg.com

9 PT IBS Indonesia

Jl. Permata V Lot EE-1
Kawasan Industri KIC
Karawang 41361 • Indonesia
Phone: +62 21 8910 8366
Fax: +62 21 8910 8367
E-Mail: ibsindonesia@ibs-ppg.com

10 IBS Manufacturing (Taicang) Co., Ltd.

No. 8 Loujiang Road Taicang
PC: 215400 Taicang Jiangsu Province • China
Phone: +86 512 81609680
Fax: +86 512 81609675
E-Mail: office@ibs-china.cn

11 IBS Japan Ltd.

6-13-5 Kamariya-Nishi
Kanazawa-Ku, Yokohama • Japan
Phone: +81 45 7810477
Fax: +81 45 7810478
E-Mail: ibsjapan@ibs-ppg.com

12 IBS do Brasil Ltda.

Rua do Metalúrgico, 140 - Salão nº3
Jardim Industrial Werner Plass
Americana - S.P. - Brasil
Cep.: 13478-720
Phone: +55 19 3478 7507
Fax: +55 19 3468 6258
E-Mail: ibsbrasil@ibs-ppg.com

www.ibs-ppg.com