BEYOND BETTER APPLICATION SERVICES

Application Training Programmes

Sharing our knowledge and experience to help you efficiently achieve best-in-class insulation solutions and reliable, expertly installed insulation systems for Energy and Industrial applications. As your trusted partner, we deliver more than just high-quality products.

www.armacell.com

armacell® services

Pioneering
efficient solutions

At Armacell, we are the pioneers in flexible foams for equipment insulation and a leading provider of engineered foam solutions. Our lightweight thermal, acoustic, and mechanical products create sustainable value for our customers across the globe.

Innovation and entrepreneurship are at the core of our identity. We drive industry-leading solutions and are committed to launching new technologies using alternative resources and natural feedstocks. Every day, our products play a crucial role in enhancing global energy efficiency, making a significant impact worldwide.

Our solutions excel in addressing the challenges of modern megatrends such as energy efficiency, noise control, lightweight construction, and the globalization of food supplies. They stand out for their functionality and ease of installation, delivering genuine value to our customers.

We value our customers as partners, dedicating ourselves to developing tailored solutions that meet their specific needs. This commitment results in added value for our business partners, substantial energy savings, and an extended lifespan for their critical equipment.

Armacell. Making a Difference Around the World.

CONTENTS

THERMAL AND ACOUSTIC INSULATION

Industrial & Energy Destinations

Our thermal and acoustic insulation solutions are integral to various energy industry systems, supporting applications in energy production and transformation. Even in the harshest environments, we deliver superior performance, operational and energy savings, and asset integrity.

ArmaFlex® is a flexible, lightweight, high-tech material featuring a closed-cell insulating structure with low thermal conductivity and an in-built water vapor barrier. Manufactured globally by Armacell, it is tailored to local requirements and often combined with other products into hybrid solutions.

ArmaGel®, our next-generation aerogel blanket range, is ultra-thin, ultra-light, environmentally safe, and suitable for applications on all types and configurations of steel equipment, with operating temperatures from -196 °C to +650 °C.

ArmaSound® Industrial Systems exemplify an outstanding hybrid solution based on the ArmaFlex product suite, delivering additional benefits by combining thermal insulation and noise reduction into a single modular solution. ArmaSound Industrial Systems offer innovative solutions for industrial, marine, and offshore environments with a unique benefit: minimizing the risk of corrosion under insulation.

ArmaClad™ Arma-Chek R, flexible non-metallic covering for industrial and energy applications, with excellent mechanical and weathering protection.

ArmaFlex Introduction

Qualification: Certified ArmaFlex installer for standard applications in Energy / Oil & Gas, that is valid for 3 years

Pre-requisite: none

DAY ONE

THEORY	1	Introduction to Course Syllabus.
	2	Discussion into Aims and Objectives of Course.
	3	Use and types of tools required for installation processing.
PRACTICAL	4	Installing ArmaFlex tubes ½ - 3 inch - straight piping . (Standard installation process).
	5	Installing ArmaFlex tubes ½ - 3 inch - straight piping. (Premium installation process for CUI – reduction – with all over adhesive coverage fixing).
	6	Fabrication of small bore pipe fitting covers (½ - 3 inch) from ArmaFlex tubes. Elbows, segmented bends, tees, reducers,cap ends, valves, unions and pipe supporting clamps and brackets.
	7	Sealing ArmaFlex terminations at flanged fittings.
	8	Use of ArmaFlex adhesive and Arma-Chek mastic.
	9	Multi-layering using tube materials.
	10	Overview of course.
	11	Questions and answers.
	12	**Completion of course.**

ArmaFlex Advanced

ADVANCED ARMAFLEX INSTALLATION TRAINING (FOR PIPING WITH LINE TEMPERATURES -50°C to +125°C)

Qualification: Certified ArmaFlex installer for standard applications in Energy / Oil & Gas, that is valid for 3 years

Pre-requisite: ArmaFlex Introduction certificate

DAY ONE		
THEORY	1	Introduction to Course Syllabus.
	2	Discussion into Aims and Objectives of Course.
	3	Use and types of tools required for advanced installation processing.
PRACTICAL	4	Use of various thickness of ArmaFlex sheet on straight line piping (seam stress).
	5	Handling and cutting of ArmaFlex grades fo sheet – EPDM and NBR.
	6	Fixing and securing of ArmaFlex sheet to pipe sizes u pto to 20 inch.
	7	Fixing and securing of ArmaFlex sheet to pipe sizes above 20 inch. (Standard or Premium) process.
	8	Fabrication of fitting cover using ArmaFlex sheet materials. • Bends 90°, Bends 45°, equal and off-set tees, reducers, vapour stops and cap ends.

Note: If above piping sizes are not applicable on the mock up training rig provided, revert to the content of the training as indicated in Day 2 / Day 3 where applicable.

ArmaFlex Advanced

DAY TWO

THEORY	1	Overview of previous day.
PRACTICAL	2	Multi-layering applications.
	3	Anti-slip applications (vertical piping).
	4	Pipe supporting • Insulation treatment to trunnion, shoes, saddles, clamps and insulated cold supports.
	5	Sealing ArmaFlex terminations at flanged fittings.
	6	Use of ArmaFlex adhesive and Arma-Chek mastic.

ArmaFlex Advanced

DAY THREE

THEORY	1	Overview of previous day.
PRACTICAL	2	Fabrication of fitting covers for valves and flanges (following contours of fitting method).
	3	Fabrication of fitting covers for valves and flanges (bespoke box type method).
	4	Lining out metal boxes with ArmaFlex sheet and ArmaGel (Hybrid) for line temperatures above +125°C.
	5	Lining out metal boxes with ArmaFlex sheet and ArmaGel DT (Hybrid) for line temperatures below -50°C.
	6	ArmaFlex terminations next to flange fittings – line temperatures above +100°C. Use of stainless steel cap ends, ArmaGel and high temperature mastic sealants.
	7	Preparing ArmaFlex for use with rigid claddings.
	8	Expansion rings using ArmaFlex sheet or 3mm thick insulation tape.
	9	Repairs and Inspection.
	10	Questions and answers session.
	11	Overview of course.
	12	**Completion of course.**

ArmaGel DT Introduction

STANDARD ARMAGEL DT 2 DAY INSTALLATION TRAINING PROGRAMME

Qualification: Certified ArmaGel DT installer for advanced applications in Energy / Oil & Gas, that is valid for 3 years

Pre-requisite: none

DAY ONE		
THEORY	1	Introduction to syllabus, aims and objectives of the course.
	2	Use of Personal Protective Equipment (PPE).
	3	Use of tools, templates and ArmaGel Application Manual.
	4	Fabricating and installing on elbow fittings through multi-layering.
	5	Introduction to Energy installation procedures and 2D drawing book for ArmaGel HT and ArmaGel DT for piping, vessels and tanks.
PRACTICAL	6	Piping application methods and fixing including 45° angle cutting.
	7	Securing the insulation using filament tape and band plus vapour barrier tapes.
	8	Demonstrating installation on piping and vessels through PowerPoint.
	9	Use of vapour stop, including hands-on work applying mastic and flexible reinforcement membrane.
	10	Use of primary and secondary vapour barriers.
	11	Application methods on straight pipe, bends, tees, and other pipe fittings using the primary vapour sheet.

ArmaGel DT Introduction

DAY TWO

THEORY	1	Overview of previous day.
PRACTICAL	2	Installing ArmaGel blankets on fittings such as elbows, tees and reducers.
	3	Fabricating, cutting and installing of ArmaGel DT insulation for pipe fittings such as segmented bends, tees, and reducers.
	4	Multi-layering installations - staggered seams / joints on straight pipe and all fittings.
	5	Hybrid insulation piping systems – installing ArmaGel DT with other material types.
	6	Insulating flanges and valves.
	7	Overview of course.
	8	Question and answer session.
	9	**Completion of course.**

ArmaGel HT and HTL Introduction

STANDARD ARMAGEL HT & HTL 2 DAY INSTALLATION TRAINING PROGRAMME

Qualification: Certified ArmaGel HT and HTL installer for advanced applications in Energy / Oil & Gas, that is valid for 3 years

Pre-requisite: none

THEORY	1	Introduction to syllabus, aims and objectives of the course.
	2	Use of Personal Protective Equipment (PPE).
	3	Use of tools, templates and ArmaGel Application Manual.
	4	Introduction to Energy installation procedures and 2D drawing book for ArmaGel HT and ArmaGel DT for piping, vessels and tanks.
PRACTICAL	5	Installing ArmaGel blanket on straight pipes.
	6	Installing ArmaGel blankets on fittings such as elbows, tees and reducers.
	7	Fabricating methods including 45° angle cutting applicable for 15 mm and 20 mm products.
	8	Fabricating, cutting and installing of ArmaGel insulation for pipe fittings such as segmented bends, tees, and reducers.
	9	Demonstrating piping and vessels through PowerPoint.
	10	Insulating bends with 2-piece ArmaGel fitting covers.
	11	Multi-layering installations - staggered seams / joints on straight pipe and all fittings.
	12	Insulating small bore piping (½ to 3 inches) using the Spiral Bandaging method.
	13	Insulating small bore piping (½ to 3 inches) using 5 mm and 10 mm thick products on straight lines with / without overlaps using spiral insulation wire fixing methods.
	14	Hybrid insulation piping systems – installing ArmaGel around other material types.
	15	Insulating flanges and valves.
	16	Insulating large and curved surface areas (vessels/tanks) with welded pins, bands and clips.
	17	Using metallic foil to insulate temperature above 400 °C.
	18	Question and answer session.
	19	**Completion of course.**

Arma-Chek R Introduction

Qualification: Certified Arma-Chek R installer for standard applications in Energy / Oil & Gas, that is valid for 3 years

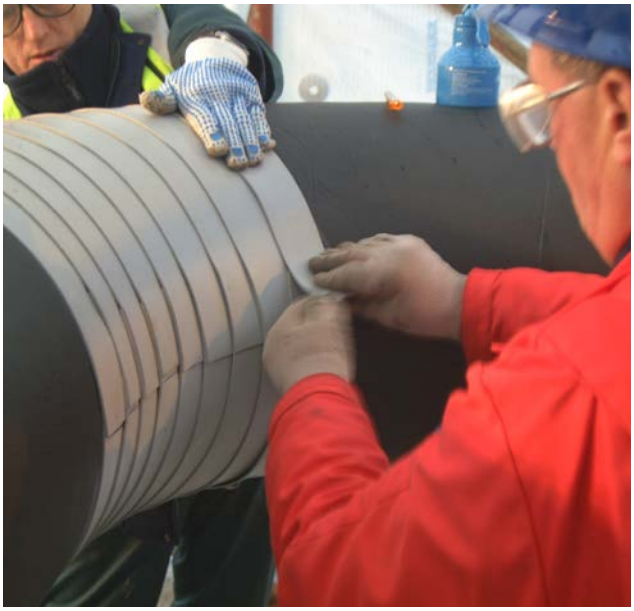
Pre-requisite: none

DAY ONE		
THEORY	1	Introduction to Course Syllabus.
	2	Discussion into Aims and Objectives of Course.
PRACTICAL	3	Fabrication and application of Arma-Chek R covering on straight pipe. (½ to 20 inch).
	4	Cutting tool options for fabricating Arma-Chek R.
	5	Fabrication and application of Arma-Chek R covering on straight pipe. (Above 20 inch and all vertical piping).
	6	Overlaping of material for small and large bore straight piping.
	7	Fabrication and development of templates for bends, elbows, tees, reducers, and cap ends.
	8	Installing segmented material to bend fittings.
	9	Installing material to tee fittings.

Arma-Chek R Introduction

DAY TWO

THEORY	1	Overview of previous day.
PRACTICAL	2	Fabrication and application process of covering to valve and flange fittings.
	3	Use of Arma-Chek mastic.
	4	Installing material to reducer fittings.
	5	Installing material to cap ends.
	6	Cleaning of Arma-Chek R.
	7	Repairs and inspection.
	8	Skill tesing for fabrication and installation of following items • Straight piping • Tee junction • Segmented bend • End cap • Arma-Chek mastic extrusions
	9	Overview of course.
	10	Questions and answers.
	11	**Completion of course.**



ArmaSound Advanced

ARMASOUND INDUSTRIAL SYSTEM C / D
ADVANCED 3 DAY INSTALLATION TRAINING PROGRAMME (FOR PIPING)

Qualification: Certified ArmaSound installer for advanced applications in Energy / Oil & Gas, that is valid for 3 years

Pre-requisite: ArmaSound Introduction certificate

DAY ONE		
THEORY	1	Introduction to Course Syllabus.
	2	Discussion into Aims and Objectives of Course.
	3	Use and types of tools required for advanced installation processing.
PRACTICAL	4	Installing ArmaFlex sheet to piping surfaces.
	5	Fixing, securing of ArmaFlex closed cell insulation at terminations pipe insulation surfaces.
	6	Fabrication techniques for producing insulation covers for elbow pipe fittings – ArmaFlex closed cell & ArmaSound 240 open cell materials.
	7	Fabrication techniques for producing insulation covers for tee & reducer fittings – ArmaFlex closed cell & ArmaSound 240 open cell materials.
	8	Use of ArmaFlex adhesive and mastic sealants plus stainless steel bands – when, where, why?
	9	Fabrication techniques for producing insulation covers for shoe & trunnion fittings – ArmaFlex closed cell & ArmaSound 240 open cell materials.
	10	Fixing and securing of ArmaSound 240 open cell materials, with adhesives, mastic sealants and stainless steel bands, when, where, why?

ArmaSound Advanced

DAY TWO

THEORY	1	Overview of previous day.
PRACTICAL	2	Fabrication & installation processing of ArmaSound acoustic barrier material to straight line piping.
	3	Process for fixing and securing all acoustic material combinations to vertical piping – “anti-slip” prevention.
	4	Use of “S” clips & insulation support rings.
	5	Fabrication & installation processing of ArmaSound barrier material for segmented elbows, tees, reducers and metal parts.
	6	Stainless steel band fixing
	7	Fabrication and application of Arma-Chek (R) covering on straight pipe. (½ to 20 inch).
	8	Cutting tool options for fabricating Arma-Chek (R).
	9	Fabrication and application of Arma-Chek (R) covering on straight pipe. (Above 20 inch and all vertical piping).
	10	Overlaping of material for small and large bore straight piping.

ArmaSound Advanced

DAY THREE

THEORY	1	Overview of previous day – continue with Arma-Chek R'
PRACTICAL	2	Fabrication and development of templates for bends, elbows, tees, reducers, and cap ends.
	3	Installing segmented material to bend fittings.
	4	Installing material to tee fittings.
	5	Use of Arma-Chek mastic.
	6	Installing material to reducer fittings.
	7	Installing material to cap ends.
	8	Cleaning of Arma-Chek R.
	9	Fabrication of fitting covers for valves and flanges.(Following contours of fitting method) *if applicable.*
	10	Fabrication of fitting covers for valves and flanges. (Bespoke box type method) *if applicable.*
	11	Overview of course.
	12	Questions and answers.
	13	**Completion of course.**

Professional Workmanship

OPTIONS

Option 1 // Workshop*

Depending on the level of training required & insulation system type, course duration between 1 & 3 days.

Option 2 // Site*

Depending on the level of training required & insulation system type, course duration between 1 & 5 days.

Option 3 // Online Know-How

Introduction to the key points of application methods for various Energy insulation systems for piping & equipment.

* Indicative Cost // Euro POA per trainer per day plus expenses (Maximum15 attendees)

1	Training will require 2 days of additional charges for travelling (Options 1 & 2). All travel, accommodation and meals will be billed.
2	Job site access and safety introduction where applicable should be provided by others before the course commences (Option 1 & 2)
3	A list of materials and tools required for workshop / job site training will be provided by Armacell in advance of applicable training option. Installer contractor to prepare and provide these before the course commences.
4	Names and photographs of all participants must be submitted to the Armacell Trainer before / during the course.
5	In the event of any delay not caused by Armacell after the arrival of the Armacell Trainer at location - a full day course fee will be charged.
6	All participants will receive a letter of confirmation after course completion or where appropriate – a certificate of competence.

Contact us to register your interest

oilandgas@armacell.com

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ABOUT ARMACELL

As the inventor of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With more than 3,300 employees and 27 production plants in 19 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems. For more information, please visit: **www.armacell.com**

For product information, please visit:
www.armacell.com/en-GB/oil-and-gas

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