



# Update on VIPA International

*We are representing the interests of the vacuum insulation panel industry worldwide*

**Sebastian Baars, CEO, Vaku-Isotherm GmbH**

**President of VIPA International**

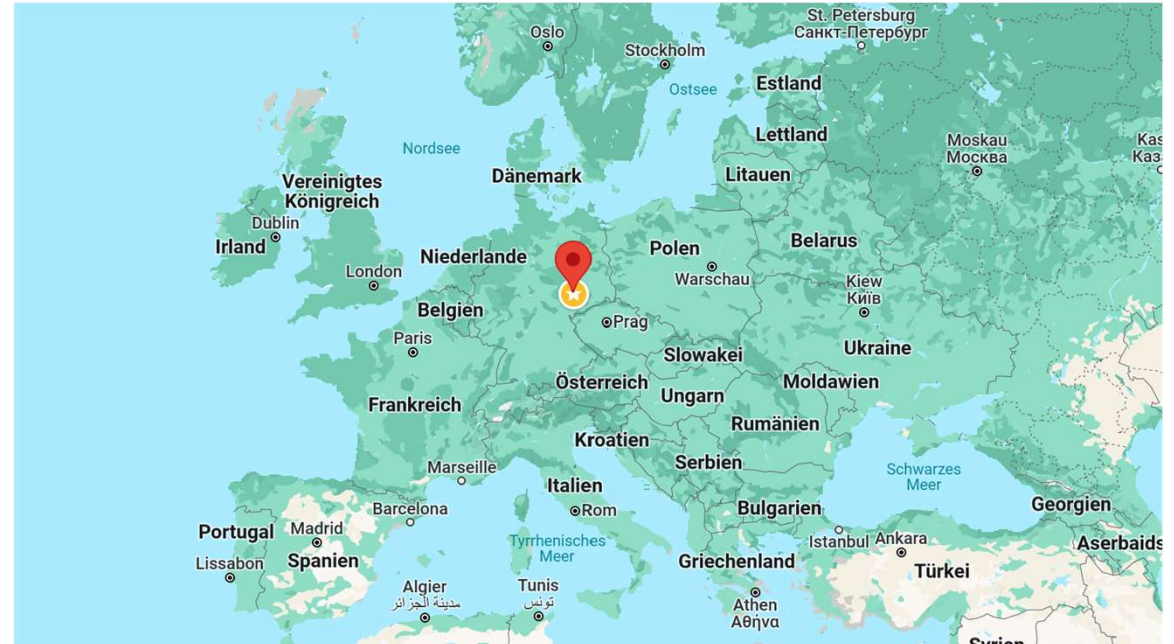
VIPA International is a 501 (c) (6) not-for-profit association incorporated under the law of the State of Delaware in the United States of America. The association's registered office is National Press Building, 529 14th Street NW, Suite 1280 Washington, DC 20045.

# About



- Based in Leipzig, Germany
- CEO of Vaku-Isotherm GmbH
- President of VIPA International
- Master of Science / Dipl. Ing. (TU) Medical

Engineering



**Sebastian Baars**

**CEO at Vaku-Isotherm GmbH**

**President of VIPA International**



# VIPA International Secretariat



**Pau Sanchis**  
Executive Director  
VIP A International



**Isabella Beck Jørgensen**  
Communications Manager  
VIP A International



**Tudor Enache**  
Assistant  
VIP A International



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# Membership & benefits

Together, we are creating awareness of the Vacuum Insulation Panel industry

- Drive Industry Progress
- Stay informed
- Share & Learn
- Expand your network
- Influence Policy Makers
- Get involved



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# Our Membership



## Regular Members



**Panasonic**



**Turvac**



YuanTing Cold Chain

# Our Membership

Associate Member



Associations

We welcome relevant associations as well!

# Main goal

To create **awareness** of the Vacuum Insulation Panel industry towards stakeholders, policy makers, relevant third parties and the consumers by

- **Providing education** on the benefits and use of VIP's
- **Engage** with stakeholders and join forces with ally associations
- To **advocate** for the common interests of the VIPs industry presenting them as the energy efficiency solution

## VISION & MISSION

### Vision

VIPA International is working towards climate neutrality whilst promoting the potential of vacuum insulation panels in the health, building and transportation sector.

### Mission:

VIPA International is **the global voice of the VIP industry**, promoting **quality** and raising **awareness** about the potential of Vacuum Insulation Pannels, to save space and energy costs, to **increase energy efficiency** and to **reduce carbon dioxide emissions** in a wide range of **applications** and industries.



# 2024 Plans and Strategy



# General Assembly 2024

Berlin, Germany

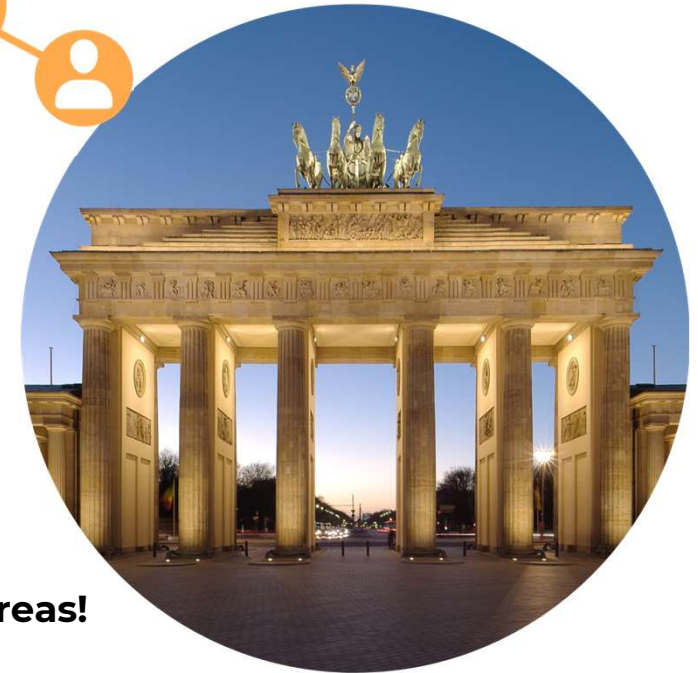
11-12  
April  
2024

## Why should you join?

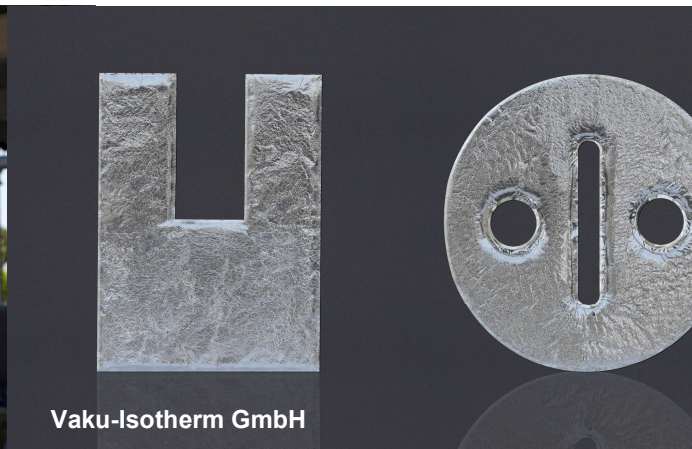
- Great networking event
- Scientific updates
- Valuable presentations from the practice
- Specific agenda coming soon

## We are currently looking for speakers in all areas!

- Get in touch if you have a study or case, you think could be interesting for our members!



# Promoting VIPs Campaign 2024



- Development and organization of an innovative and effective marketing campaign with an agency to accelerate the awareness for VIPs and promote our members

→ Start in December 2023

## Scientific Studies 2024

- VIPA is looking for new innovative studies in the field of vacuum insulation panels to fund
- Ideas and presentations for studies are welcome to be presented
- Last study: Brunel university – one pager for a London apartment which compares different insulation materials with vacuum-insulation-panels in terms of cost effectiveness

# Case Studies from VIPA members

On our website we have a series of case studies provided by our members



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## Providing Thermal Protection for COVID-19 Vaccine Shipments from BioNTech Facilities



### The Solution

### The Problem

The Pfizer-BioNTech COVID-19 Vaccine (BNT162b2), which is based on BioNTech's proprietary mRNA technology, was developed by both BioNTech and Pfizer. While the short term shelf-life conditions for up to 31 days are easy to handle at fridge temperatures, the frozen vials can be stored and transported at  $-90^{\circ}\text{C}$  to  $-60^{\circ}\text{C}$  for up to six months.



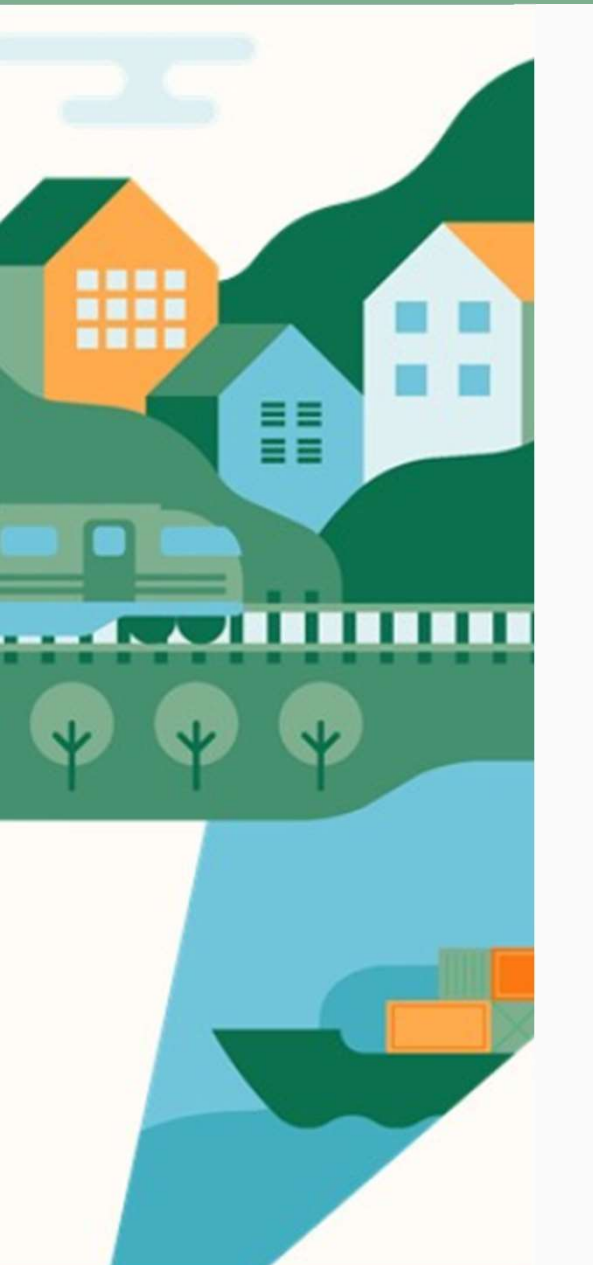
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## Work on standardization of VIPs

- European Standard EN 17140:2020 was published in October 2020 – since then the publication in the official journal of the EU (OJEU) was outstanding
- VIPA worked strongly together with the DIN to accelerate the process but with no success
- VIPA was informed in 2023 that the process for the standardization procedure was revised and therefore all applications need to be done again
- VIPA is having a meeting with the responsible policy maker in the EU to give a feedback from industry side
- On the international side the ISO/AWI 16478 is still under development
- In China the GB/T 37608-2019 entered into force in May 2020



**Thank you very much for your attention**



# Contact Us

Thanks for your attention today!  
Let's stay in touch.



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VIPA International - Vacuum Insulation Panel Association



[vipa-international.org](https://vipa-international.org) 

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# Facts

Peer-reviewed academic articles that substantiate the benefits of employing VIPs

Article “Whole building retrofit using vacuum insulation panels and energy performance analysis.”, published at U.S. Department of Energy

- Authors: K. Biswas, T.Patel, Som Shrestha, D.Smith, A. Desjarlais

Thesis: The article explores the successful retrofitting of a building in a cold climate using VIPs, with a particular focus on the cost-effective MAI variant. The study demonstrates the feasibility and durability of these panels and highlights their potential for achieving significant energy savings in retrofit projects

Article: “Ultra-high R/inch VIP with developmental core material and self-healing films to improve durability of VIPs”

- Authors: US Department of Energy

Thesis: projects presenting using VIPs, promise a disruptive impact on building insulation technologies and will enable the Department of Energy a target of 45% reduction in building energy use intensity by 2030.

Article: “Vacuum Insulated Panels in a Roofing Application Camden U.S. Post Office and Courthouse Camden, New Jersey” at Oak Ridge National Laboratory

- Authors: D.Howett, T. Stovall, M. Bhandari, K. Biswas

Thesis: VIPs are a viable option for roofing applications where a higher R-value is needed. The cost-effectiveness of VIPs in roofing applications depends on the economic parameters of each site. Factors contributing to the viability of VIPs include high unit energy costs, extreme climate zones (e.g., Arctic or Southwest), and single-story buildings with large, flat roofs (e.g., office buildings or large maintenance facilities).



## Facts – Brunel Study

- Scope & objective
  - The heating and cooling energy consumption of a detached residential building located in London.
  - The objective of the study is to observe the effect of two different types of insulation materials on the annual energy consumption of the building.
  - The simulation used the current weather file of London, UK (year 2021) for the ambient temperatures, which was the main source of inner temperature variations, apart from small heat gain sources such as lighting and humans.
  - The heating and cooling in this building were set to maintain the temperature of the building at 22 °C, without any input power constraint
  - Two insulation materials studied were Polyurethane (PU) foam and Vacuum Insulation Panel (VIP).

PU foam	Thermal conductivity (mW/m/K)	22
	Density (kg/m <sup>3</sup> )	50
	Specific heat capacity (kJ/kg/K)	2.5
VIP	Thermal conductivity (mW/m/K)	7
	Density (kg/m <sup>3</sup> )	180
	Specific heat capacity (kJ/kg/K)	2.5

# Facts – Brunel Study

Cases	Description		
	Heating	Cooling	Insulation
Case 1	No	No	No
Case 2	No	No	70 mm PU foam
Case 3	No	No	40 mm VIP
Case 4	Yes	No	No
Case 5a	Yes	No	70 mm PU foam
Case 5b	Yes	No	40 mm PU foam
Case 6	Yes	No	40 mm VIP
Case 8	Yes	Yes	No
Case 7a	Yes	Yes	70 mm PU foam
Case 7b	Yes	Yes	40 mm PU foam
Case 9	Yes	Yes	40 mm VIP

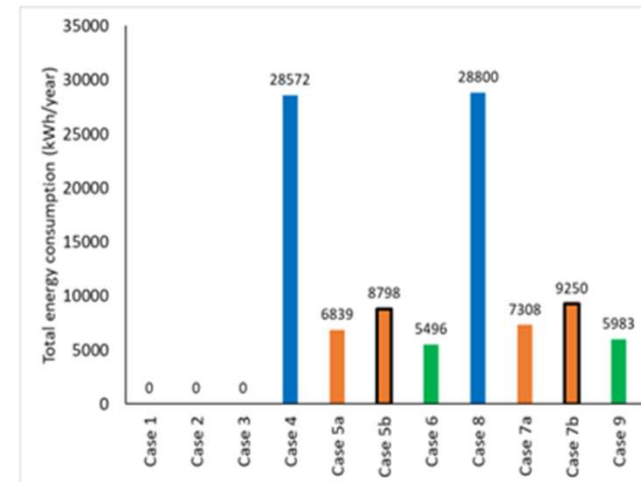


Figure 1 Energy consumption of the building for cases listed in table 1.

## Facts – Brunel Study

These graphs show the cost-benefit analysis for the scenarios of Case 6 (Heating with VIP insulation). The payback period for VIPs based on savings (fuel savings and income from extra usable space) is predicted to be approximately 10 months for VIPs and 2 years when extra income from space saved is not considered. Foam performed much worse than VIPs as can be seen from Figure 4.

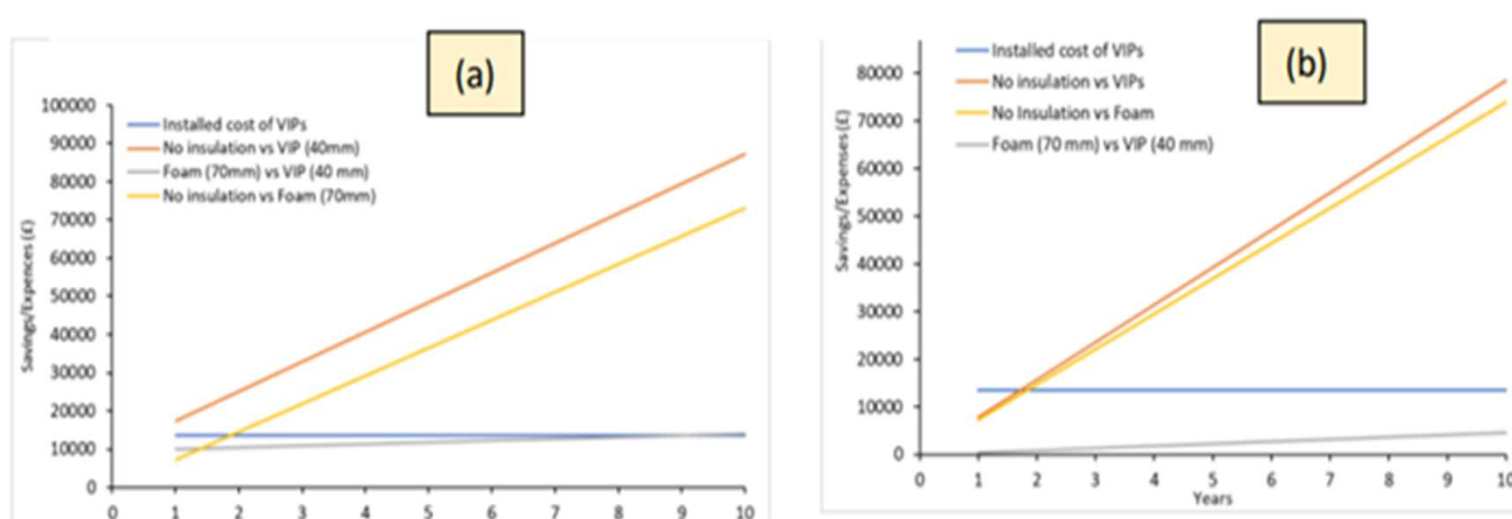


Figure 4. Cost-benefit analysis for the dwellings for Case 6 (a) with increased income due to indoor usable space saved and (b) without any increased income from usable space saved