

<b>Development of the enthalpy heat exchanger air to air</b>					
The main objective of the project is to develop an enthalpy heat exchanger (shape, geometry). It includes also the development of a suitable material for the heat transfer surfaces or a surface treatment and the development of a technology for material processing.					
Code	TA01020313				
State providing funder	TA ČR (TA0) <a href="https://www.tacr.cz/en/homepage/">https://www.tacr.cz/en/homepage/</a>				
Programme	TA – ALFA (2011-2016) <a href="https://www.tacr.cz/en/alfa-programme/">https://www.tacr.cz/en/alfa-programme/</a>				
Total eligible costs	16 696 000 CZ				
Total project subsidy	12 948 000 CZ				
Subsidy FME TUL	5 120 000 CZ				
TUL project number	17570				
Contractor	2vv s.r.o. <a href="https://www.2vv.cz/en/">https://www.2vv.cz/en/</a>				
Project participant	TUL, Faculty of Mechanical Engineering				
Principal investigator TUL	doc. Ing. Václav Dvořák, Ph.D.				
Department	Department of Power Engineering Equipment <a href="http://www.fs.tul.cz/en/construction/energy-equipment/research-and-innovations/">http://www.fs.tul.cz/en/construction/energy-equipment/research-and-innovations/</a>				
Period	2011-2014				
<a href="https://www.rvvi.cz/cep?s=jednoduche-vyhledavani&amp;ss=detail&amp;n=0&amp;h=TA01020313">https://www.rvvi.cz/cep?s=jednoduche-vyhledavani&amp;ss=detail&amp;n=0&amp;h=TA01020313</a>					
<b>Costs (year) TUL</b>	2011	2012	2013	2014	Total
Non-investment (CZK)	1 155 000	1 155 000	1 155 000	1 155 000	4 620 000
Investment (CZK)	125 000	125 000	125 000	125 000	500 000
<b>Total (CZK) TUL</b>	<b>1 280 000</b>	<b>1 280 000</b>	<b>1 280 000</b>	<b>1 280 000</b>	<b>5 120 000</b>
<b>Project results</b>					
2011		<a href="#">RIV/46747885:24210/11:#0002380 - Zařízení pro měření přestupu tepla a vlhkosti v tenkých materiálech (2011)</a>			
2011		<a href="#">RIV/46747885:24210/11:#0002385 - NUMERICAL SIMULATIONS OF RECOVERY HEAT EXCHANGERS (2011)</a>			
2011		<a href="#">RIV/46747885:24210/11:#0002385 - NUMERICAL SIMULATIONS OF RECOVERY HEAT EXCHANGERS (2011)</a>			
2013		<a href="#">RIV/46747885:24210/12:#0002667 - Evaluation of material properties determining the moisture transfer (2013)</a>			
2013		<a href="#">RIV/46747885:24210/12:#0002678 - Measurement of Moisture Transport in the Membrane-Based Enthalpy Exchanger (2013)</a>			
2012		<a href="#">RIV/46747885:24210/12:#0002704 - Zkušební zařízení na měření prodyšnosti membrány (2012)</a>			
2013		<a href="#">RIV/46747885:24210/13:#0004302 - Measurement of Moisture Transport in the Membrane-Based Enthalpy Exchanger (2013)</a>			
2013		<a href="#">RIV/46747885:24210/13:#0004307 - Evaluation of material properties determining the moisture transfer (2013)</a>			
2014		<a href="#">RIV/46747885:24210/13:#0004313 - Investigation of effect of oblique ridges on heat transfer in plate heat exchangers (2014)</a>			
2014		<a href="#">RIV/46747885:24210/13:#0004319 - Evaluation of the convection moisture coefficient using various methods (2014)</a>			
2013		<a href="#">RIV/46747885:24210/13:#0004325 - Testing of materials for heat and moisture</a>			

		<a href="#">transport (2013)</a>
2013		<a href="#">RIV/46747885:24210/13:#0004329 - Determination of very low permeability of membranes to air (2013)</a>
2013		<a href="#">RIV/46747885:24210/13:#0004338 - Testing method of materials for enthalpy wheels (2013)</a>
2014		<a href="#">RIV/46747885:24210/13:#0005564 - Investigation of effect of oblique ridges on heat transfer in plate heat exchangers (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006310 - Design tool for heat transfer surface of counterflow heat exchanger (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006310 - Design tool for heat transfer surface of counterflow heat exchanger (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006311 - Vliv provedení teplosměnné plochy na parametry protiproudého výměníku (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006311 - Vliv provedení teplosměnné plochy na parametry protiproudého výměníku (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006312 - A method for optimization of plate heat exchanger (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006313 - Optimization of plate heat exchangers with intermittent ridges (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006314 - Optimization of counter flow plate heat exchangers (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006333 - Investigation of effect of oblique ridges on heat transfer in plate heat exchangers (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006333 - Investigation of effect of oblique ridges on heat transfer in plate heat exchangers (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006339 - Evaluation of the convection moisture coefficient using various methods (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006675 - Protiproudý entalpický výměník tepla (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006676 - Protiproudý entalpický výměník tepla (2014)</a>
2014		<a href="#">RIV/46747885:24210/14:#0006677 - Technologie výroby entalpického výměníku tepla (2014)</a>
2015		<a href="#">RIV/46747885:24210/15:#0006674 - Entalpický výměník tepla (2015)</a>
2015		<a href="#">RIV/46747885:24210/15:00002773 - Influence of mesh quality and density on numerical calculation of heat exchanger with undulation in herringbone pattern (2015)</a>
2015		<a href="#">RIV/46747885:24210/15:00002773 - Influence of mesh quality and density on numerical calculation of heat exchanger with undulation in herringbone pattern (2015)</a>
2015		<a href="#">RIV/46747885:24210/15:00002774 - Numerical investigation of counter flow plate heat exchanger (2015)</a>
2016		<a href="#">RIV/46747885:24210/16:00000609 - Advanced methods of modelling and design of plate heat exchangers (2016)</a>
2016		<a href="#">RIV/46747885:24210/16:00002967 - Entalpický výměník tepla (2016)</a>