TIGI achieves IP foothold in transparently insulated solar thermal collectors

Honeycomb collectors – a new category

The honeycomb collector is on its way to becoming a new category in solar thermal. Combining the thermal efficiency of evacuated collectors with the collection efficiency of flat plate collectors, honeycomb collectors open up new opportunities in the process heat and cold climate sectors of solar thermal heat. Pioneering work by TIGI’s founders on transparently insulated solar thermal collectors from the 1990s demonstrated the performance advantages in terms of efficiency at high temperature differentials between collector and environment. This work is now in the public domain.

However, since 2010, TIGI has invested heavily in R&D to overcome the key challenge in honeycomb collector productization – overheating. Recently, the US and Japanese patent offices have allowed broad claims protecting TIGI’s Overheat Protection Device in several different embodiments. Similar claims are pending in many other geographies including the Chinese and European patent offices. Furthermore, an additional invention disclosure, describing multiple applications of transparently insulated solar thermal collectors has been allowed in China and is also pending in multiple additional geographies. All in all, TIGI’s current portfolio comprises 7 patent families ranging from those mentioned above to our most recent application for an in-line heater integrated honeycomb storage collector, which received a clean search report from the EPO.