**ES- ZHENSHI GROUP & JUSHI GROUP v OCV INTELLECTUAL CAPITAL.**

**Zhenshi Group Hengshi Fiberglass Fabrics Co., LTD & Jushi Group Co., LT v. OCV Intellectual Capital, LLC., Commercial Court of Barcelona N.º 5, Spain, 12 September 2017, Case number: 433/2015.**

The Commercial Court of Barcelona n.º 5 has handed down its decision in a patent nullity case regarding patent ES 2.1405.941 T9, Spanish part of patent EP 1.831.118 B1. The aforementioned patent protects a selection invention, that is a patent which deals with the selection of individual elements, sub-sets, or sub-ranges, which have not been explicitly mentioned, within a larger known set or range. Specifically, the patent’s protected subject-matter was a multiple overlapping ranges invention.

In May 2015 the companies Zenshi Group and Jushi Group (hereinafter “the plaintiffs”), which commercialize and manufacture glass fiber products, brought an action seeking revocation of patent ES’941, owned by OCV Intellectual Capital LLC (hereinafter “OCV”), based on lack of novelty and inventive step in the light of patent US 4.199.364.

Patent ES’941 is entitled “*Glass yarns for reinforcing organic and/or inorganic materials*” and related to glass “reinforcement” strands (or “fibers”), that is to say those that can reinforce organic and/or inorganic materials and can be used as textile strands, it being possible for these strands to be obtained by the process that consists in mechanically attenuating the streams of molten glass that flow out of orifices located in the base of a bushing which is generally heated by resistance heating.

The most relevant issue in this case is that patent ES’941 is a selection invention. Moreover, when the invention refers to a subsequent selected range of values which is not comprehensively included in the range known from the prior art, but simply overlaps in part with the range of the prior art, it is called overlapping ranges invention

For better understanding of the area in which ES’941 and US’364 overlapped, the Commercial Court included the following chart in its decision:



The overlap area for the CaO/MgO ratio is 2 - 1.59 = 0.41, which is 23.4% of the range calculated from US’364’s Table VI. The overlap area of the sum Al2O3+MgO+Li2O is 23-27.5 i.e. 51% of the range calculated from Table VI.

The Commercial Court followed the European Patent Office (“EPO”) doctrine on selection inventions provided in its Guidelines for Examination, Part G, Chapter VI, Section 8 to assess whether or not patent ES’941 was novel. Being ES’941’s invention a case of overlapping chemical formulae its “*novelty is acknowledged if the claimed subject-matter is distinguished from the prior art in the range of overlap by a new technical element (new technical teaching), […].If this is not the case, then it must be considered whether the skilled person would seriously contemplate working in the range of overlap and/or would accept that the area of overlap is directly and unambiguously disclosed in an implicit manner in the prior art (see for example T 536/95). If the answer is yes, then novelty is lacking.”*

Hence, there are three main points to evaluate when assessing the novelty of an overlapping chemical formulae invention:

1. The existence of a new technical teaching.
2. If the area of overlap is directly and unambiguously disclosed in an implicit manner in the prior art.
3. If the skilled person would seriously contemplate working in the range of overlap.

The Commercial Court studied the state of the art on the date of patent ES’941 application and reached the conclusion that the complexity of the changes in the “E” glass composition is already noticed in the state of the art due to the multiple variables involved and the multiple problems/errors that may result. Also, patent US’364 established in its description that it is intended to produce glass compositions that do not contain boron and do not contain fluorine, which have reduced production costs and low environmental impact, but maintaining good typical properties of "E" glass and "621" glass.

However, patent ES’941 pursues a different purpose. The patent’s new technical effect is to reduce the maximum growth rate of the crystalline phases (devitrification) in the glass manufacturing process, for which it is essential to control the weight ratio of CaO / MgO (lower or equal to 2, preferably higher than 1) and, in turn, maintain specific Young's modulus values satisfactory, this last, by the preferred sum of the contents of Al2O3+MgO+Li2O greater than or equal to 23%. All this within the framework of an extremely complex state of the art, since any change in the composition of the “E” glass would entail the risk of multiple errors in the glass manufacturing process. Therefore, it has an object or purpose different from patent US'364.

Once the new technical teaching had been evaluated, the Commercial Court assessed if the skilled person would seriously contemplate working in the range of overlap. In this regard, the Court considered that it is not possible to find any teaching or indication in patent US’364 by which the expert in the field had any reason to concentrate on the combination of the sub-ranges as defined in patent ES’941. As established in the EPO Boards of Appeal decision T 653/93 “*In the absence of any indication to this end, the "combined selection" does not emerge from document (1) as being implicitly disclosed for the skilled man*".

Patent US'365 neither deals nor cares specifically for the weight ratio of CaO / MgO or for Al2O3+MgO+Li2O, beyond its combination with the rest of the constituents. That is, they were not "prominent" features and did not lead to an unambiguous implicit disclosure. Therefore, this led the Court to rule out that the expert in the field would have seriously contemplated working in the overlapping ranges, in particular, in the aforementioned CaO / MgO and Al2O3+MgO+Li2O.

In this regard, the Commercial Court of Barcelona refers to the decision issued on 6 February 2017 by the UK High Court of Justice in a case where the same patents where being discussed between the same parties. Lord Hacon pointed in said decision that *“if a party wishes to argue that a patent lacks novelty pursuant to the application of the ‘serious contemplation’ criterion, it must provide evidence of the relevant overall area of overlap, not in terms of the nearest percentage necessarily, but enough to give the court a sufficiently accurate impression of where it is and how large it is.”*

The only evidence provided by the parties on the percentage was filed by OCV. Indeed, at the request of OCV, its experts performed a probabilistic calculation to assess the probability that the expert in the field had selected, for each of US '364’s Table VI constituents, values within the overlapping areas of ES’941. They concluded that the probability that the person skilled in the art, while producing a composition of Table VI of US’364, would have accidentally selected all values that meet the conditions expressed by claims 1 or 10 would have been extremely low.

Finally, the Commercial Court considered that EPO Decisions T 1196/05 and 245/91 justified the probabilistic argument, which would reinforce, together with the rest of the arguments presented, its conclusion to rule out that the expert in the matter would have seriously contemplated working in the overlapping ranges of ES’941 and US’364.

Regarding the lack of inventive step attack the plaintiffs alleged that the invention would be just an arbitrary selection from the prior art, specifically from patent US’364 since the technical effects described in patent ES’941 were not true. However, the plaintiffs allegation could not succeed since they had not applied the problem/solution approach or any other method to evaluate the inventive step of the patent at stake. The second objection was the lack of any practical or experimental expert test that substantiate said allegation of the absence of the technical effects described in patent ES’941.

The Court considered that the technical effect of the invention was provided by the experimental tests carried out by the defendant OCV, even though the burden of proof of the lack of the patent’s practical usefulness would correspond to the plaintiffs since they were the ones who denied it.

Therefore, the Commercial Count n.º 5 of Barcelona dismissed the claim and the patent was held to be valid.