CLAIMS

1. A configuration method of an electric power conversion installation ~~(1)~~, the installation comprising several converters ~~(2)~~, the method comprising a step of determining a set of converters to be activated and an activation step of this set of converters,

wherein in the step of determining, for an electric power system to be supplied, the number of converters to be activated being determined according to the following formulas:

N_{FC} = rounded.up (S_t / S_{FC}) with S_t = min [m/k × S_{ship}, S_n] and $I_{sc\ FC}$= k × In and $I_{sc\ max}$ = m × In,

in which,

S_n : maximum rated power of the conversion installation;

S_t : rated power of the conversion installation after configuration;

S_{FC} : rated power of the converters;

N_{FC} : number of converters activated;

S_{ship} : rated power of the power system to be supplied;

$I_{sc\ FC}$: rated short-circuit current of a converter;

k : multiplication factor;

$I_{sc\ max}$: maximum short-circuit current demanded by the power system to be supplied;

m : multiplication factor.

2. The configuration method according to claim 1, characterized in that it comprises an interconnection step of at least certain of the converters of the set.

3. The configuration method according to claim 1 or 2, characterized in that, in the step of determining the converters to be activated, the following are used:

- information on the rated power of the installation, and/or
- information on the unitary rated power of a converter, and/or
- information on the number of electric power systems to be supplied by means of the installation, and/or

- information on the power required by each electric power system to be supplied, and/or
- information on the rated short-circuit current of a converter, and/or
- information on the maximum short-circuit current required by an electric power system to be supplied.

~~4. The configuration method according to one of the foregoing claims, characterized in that, for an electric power system (42) to be supplied, the number of converters to be activated can be determined according to the following formulas:~~

~~N_{FC} = rounded.up (S_t / S_{FC}) with S_t = min [m/k × S_{ship}, S_n] and $I_{sc\,FC}$= k × In and $I_{sc\,max}$ = m × In,~~

~~in which,~~

~~**S_n : maximum rated power of the conversion installation;**~~

~~**S_t : rated power of the conversion installation after configuration;**~~

~~**S_{FC} : rated power of the converters;**~~

~~**N_{FC} : number of converters activated;**~~

~~**S_{ship} : rated power of the power system to be supplied;**~~

~~**$I_{sc\,FC}$: rated short-circuit current of a converter;**~~

~~**k : multiplication factor;**~~

~~**$I_{sc\,max}$: maximum short-circuit current demanded by the power system to be supplied;**~~

~~**m : multiplication factor.**~~

45. The configuration method according to one of the foregoing claims, characterized in that, for several electric power systems ~~(42)~~ to be supplied, the number of converters to be activated can be determined according to the following formulas:

N_{FC} = rounded.up (S_t / S_{FC}) with

$$S_t = \max\left[\sum_{i=1}^{N_{shj}} S_{shipi}, \min\left[S_n, \frac{m}{k} \cdot \max\left[S_{shipi}\right]\right]\right],$$

in which,

S_n : maximum rated power of the conversion installation;

S_t : rated power of the conversion installation after configuration;

S_{FC} : rated power of the frequency converters;

N_{FC} : number of frequency converters activated;

$S_{ship\ i}$: rated power of the power system i to be supplied;

k : multiplication factor;

m : multiplication factor.

5~~6~~. The configuration method according to one of the foregoing claims, characterized in that it comprises a step of determining at least one sub-set of converters to be interconnected from among the activated converters and an interconnection step of the converters of this at least one converter sub-set.

6~~7~~. The configuration method according to the previous claim, characterized in that interconnection is performed by control of at least one controlled switch ~~(12, 13)~~.

7~~8~~. An electric power conversion installation ~~(1)~~ comprising several converters ~~(2)~~, the installation comprising hardware means ~~(11, 12, 13, 100)~~ and/or software means for implementing the configuration method according to one of the foregoing claims.

8~~9~~. The installation ~~(1)~~ according to the previous claim, characterized in that the hardware and/or software means comprise an element ~~(101)~~ for determining a set of converters to be activated and an activation element ~~(102)~~ of this set of converters.

9~~10~~. The installation ~~(1)~~ according to claim 7~~8~~ or 8~~9~~, characterized in that the hardware and/or software means comprise an element ~~(103)~~ for determining at least one sub-set of converters to be interconnected from among the set of

activated converters and an interconnection element ~~(12, 13, 14)~~ of the converters of this at least one converter sub-set.

10~~1~~. The installation ~~(1)~~ according to the previous claim, characterized in that the interconnection element comprises at least one controlled switch ~~(12, 13)~~.

11~~2~~. The installation ~~(1)~~ according to one of claims 7~~8~~ to 10~~1~~, characterized in that each converter comprises a frequency conversion element ~~(10)~~ and/or a voltage conversion element ~~(11)~~.

12~~3~~. A computer program comprising computer program encoding means suitable for execution of steps of the method according to one of claims 1 to 6~~7~~ when the program is executed on a computer.