Page 1

Figure 1

|  |  |
| --- | --- |
| Clips | תפסי אחיזה |
| Bridge | גשר |
| Clip tab | לשונית אחיזה |
| Gasket | אטם |

Page 2

Figure 2

|  |  |
| --- | --- |
| Clips | תפסי אחיזה |
| Gasket spineor Gasket backbone | שדרת אטם |
|  |  |
|  |  |

Figure 3

|  |  |
| --- | --- |
| Clips | תפסי אחיזה |
|  |  |
|  |  |
|  |  |

Page 3

Figure 10

Gasket/plate locking clip

Single window with locking rims – plate side

1. Window formed by cutting and pulling
2. Upper window contour
3. Lower window contour
4. Upper continuous locking rim
5. Lower continuous locking rim
6. Upper perpendicular locking rim

Lower perpendicular locking rim

Figure 11

Gasket/plate locking clip

Gasket structure for locking with a single window

1. Surfaces for gasket insertion-bysliding surfaces by pressure (P) from above
2. Upper continuous confinement edge
3. Upper perpendicular confinement edge
4. Lower continuous confinement edge
5. Lower perpendicular confinement edge
6. Gasket wedge

Page 4

Figure 12

|  |  |
| --- | --- |
| Rght | ימין |
| Left | שמאל |
|  |  |
|  |  |

Double locking clip for plate gasket

Two parallel individual windows with locking flange – plate side

1. 1’ – Window formed by cutting / pulling
2. 2’ – Upper window contour
3. 3’ – Lower window contour
4. 4’ – Locking flange upper continuation
5. 5’ – Locking flange lower continuation
6. 6’ – Locking flange upper vertical
7. 7’ – Locking flange lower vertical

Page 5

Figure 13

Double locking gasket/plate clip

Structure of wedge gasket for locking double parallel window

1. 1’ - Downward gasket sliding plane on pressure (P) from above
2. 2’ – Confined flange upper continuations
3. 3’ – Confined flange upper vertical
4. 4’ – Confined flange lower continuation
5. 5’ – Confined flange lower vertical
6. Gasket wedge for two parallel locking windows

Page 6

Figure 17

Lateral direct locking of the gasket spine against a single window and for locking flanges

Figure 14

Plate with window and locking flanges (and locking surfaces)

For lateral direct locking of the gasket spine

1. Window formed by cutting and pulling
2. Upper window contour
3. Lower window contour
4. Locking flange upper continuation
5. Locking flange lower continuation
6. Locking flange upper vertical
7. Locking flange lower vertical

Page 7

Gasket

Figure 16

1. Sliding plane on pressure (P) from above
2. Confinement flange upper continuation
3. Confinement flange upper vertical
4. Confinement flange lower vertical
5. Gasket spine for direct lateral locking

--------------------

Figure 15

Plate (and gasket)

2. Locking flange upper continuation

3. Locking flange upper vertical

4. Locking flange lower vertical

5. Gasket groove

11. Out gasket

12. Side of plate heat exchanger

Page 8

Figure 19

|  |  |
| --- | --- |
| Gasket | אטם |
| Typical clip | תפס אופיוני |
|  |  |
|  |  |

Page 9

Figure 15

Prior Art

-------------------------------

Figure 20

Locking clip with two locking windows for use with 6 locking flanges

1. Left window
2. Right window
3. ------------[NONE - remove]
4. 4’ Upper locking flanges

Left and right continuations

1. 5’ - Lower locking flanges
left and right continuations
2. 6’ – Upper perpendicular locking flanges left and right
3. 7’ – Lower perpendicular locking flanges left and right

---------------------------------

Figure 18a

Lateral direct locking of gasket spine against a single window and 4 locking flanges

-------------------------

Figure 18c

Single window

Grip

On one side use on all four locking flanges

Figure 5

--Possibly unlabeled figure next to 18c and above 18b ----- this seems to be a separate picture from 18b It is unlabeled in as for as it does not have a Figure number. It is however labelled at Section A-A (which is marked on 18a).

1. Window

2. Gasket

3. Gasket groove

4. Upper window rim

5. Lower continuous Window rim

6. Perpendicular window rim

A-A Cross-section

Single grip on one side

Use of three of four possible locking flanges

Page 10

Double locking clip

???

Gasket with diagonal wedge

Figure 22

Page 11

Figure 25a

Lateral gripping of the gasket spine

----

Figure 25 b

-------------------------------

Figure 25c

Page 12

Figure 25d

Page 13

Figure 26a

1. Gasket groove in valley with side walls at peak height or part of it
2. Valley (lower portion) reinforcing and supporting surfaces
3. Geometric protrusions in the plate on the peak plane
4. gasket clip Window
5. Protrusions at peak height \_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| Plate | פלטה |
| Gasket | אטם |
| Opening and closing lever | מנוף נעילה ופתיחה |
|  |  |

Gasket (1) with loop (3) clip (2)

-------------------------------------------------------

Figure 26b

1. Gasket spine
2. Loop clip
3. Clip with confinement surfaces above and below

Page 14

Figure 27

|  |  |
| --- | --- |
| Gasket groove | חרוץ לאטם |
| Gasket groove | חרוץ האטם |
|  |  |
|  |  |

Page 15

Figure 28

|  |  |
| --- | --- |
| Plate | פלטה |
| Double clip | תפס כפול |
| Loop | לולאה |
| Gasket spine | שדרת האטם |
| Loop with double clip | לולאה עם תפס כפול |

Page 16

Figure 50

|  |  |
| --- | --- |
| Plate | פלטה |
| Gasket groove | חריץ האטם |
| \_\_\_\_\_\_\_\_\_\_ window, open below for locking the gasket | חלון צורני פתוח למטה לנעילת האטם |
| Gasket | אטם |
| Concealed clip | תפס מוסתר |
| Gasket loop | לולאת אטם |
| Gasket | אטם |
| Clip | תפס |
|  | הדרות אטם |

Page 17

Figure 90

Upper projection

Lower projection

Gasket wedge

-------------------------------

Figure 91

Upper projection

ל

Lower projection

----------------------------------------------------------------------

1. Angular vertical window approximately on the left
2. Angular vertical window approximately on the right
3. NONE REMOVE
4. 4’ – Window rims – left and right upper continuous
5. 5’ – Window rims - right and left lower continuations
6. 6’ – Window flanges right and right upper vertical
7. 7’ – Window flanges right and left lower vertical

(b) Depth of plate pressure

Page 18

Figure 92

Height of the window can be equal to or less than (b)

|  |  |
| --- | --- |
|  [the statement, which word won’t write the way it want it] is true | מתקיים |
|  |  |
|  |  |

Figure 93

The window can change in its height and width and form

|  |  |
| --- | --- |
| \_\_\_\_\_\_\_\_\_Open Window | חלון פתוח צורני |
| Closed window | חלון סגור |
| opening | פתח |

The window can be closed on all sides, or it can be open on one or more sides and closed on the remaining sides.

Page 19

Figure 23

|  |  |
| --- | --- |
| Plate of a multi-clip gasket with confinement surfaces | פלטה לאטם רב תפסים עם משטרי כליאה |
| Empty spaces in the gasket for extra flexibility for insertion into the locking location | חללים באטם לתוספת גמישות בהכנסה למקום הנעילה |
|  |  |

---------------------------------

Figure 23

|  |  |
| --- | --- |
| Arrows show places above the confinement surfaces and \_\_\_\_\_\_\_\_\_\_\_\_\_ | חוצים מראים מקומות מעל?? משטחי כליאה ו??? |
|  |  |
|  |  |

Page 20

Figure 96

Rotating window with base

1. Vertical rotating window on three sides. The fourth side holds the bottom of the window in place.