

delete 可以通过结合 decreaseKey 和 deleteMin 而以时间  $O(\log N)$  完成。

```

1      /**
2      * Merge rhs into the priority queue.
3      * rhs becomes empty. rhs must be different from this.
4      * @param rhs the other binomial queue.
5      */
6      public void merge( BinomialQueue<AnyType> rhs )
7      {
8          if( this == rhs )    // Avoid aliasing problems
9              return;
10
11         currentSize += rhs.currentSize;
12
13         if( currentSize > capacity() )
14         {
15             int maxLength = Math.max( theTrees.length, rhs.theTrees.length );
16             expandTheTrees( maxLength + 1 );
17         }
18
19         Node<AnyType> carry = null;
20         for( int i = 0, j = 1; j <= currentSize; i++, j *= 2 )
21         {
22             Node<AnyType> t1 = theTrees[ i ];
23             Node<AnyType> t2 = i < rhs.theTrees.length ? rhs.theTrees[ i ] : null;
24
25             int whichCase = t1 == null ? 0 : 1;
26             whichCase += t2 == null ? 0 : 2;
27             whichCase += carry == null ? 0 : 4;
28
29             switch( whichCase )
30             {
31                 case 0: /* No trees */
32                 case 1: /* Only this */
33                     break;
34                 case 2: /* Only rhs */
35                     theTrees[ i ] = t2;
36                     rhs.theTrees[ i ] = null;
37                     break;
38                 case 4: /* Only carry */
39                     theTrees[ i ] = carry;
40                     carry = null;
41                     break;
42                 case 3: /* this and rhs */
43                     carry = combineTrees( t1, t2 );
44                     theTrees[ i ] = rhs.theTrees[ i ] = null;
45                     break;
46                 case 5: /* this and carry */
47                     carry = combineTrees( t1, carry );

```

图 6-55 合并两个优先队列的例程