```
min_arg_unique  THM

⊢  ∀f:(ℕ→𝔹), n,k:ℕ.
|  f(n) = f(k) ⇒ MinArg(f : {0..n⁺}) = MinArg(f : {0..k⁺}) ∈ ℕ
| by UnivCD THEN Unfold ‘min_arg‘ 0
|
1. f : ℕ→𝔹
2. n : ℕ
3. k : ℕ
4. f(n) = f(k)
⊢  n-MinAr(f;n;n) = k-MinAr(f;k;k)  by Decide (k<n)
|
|\
| 5. k<n
| ⊢
| | by Inst
| |    Thm* ∀f:(ℕ→𝔹), n:ℕ, i:ℕ(n+1), j:ℕ(n-i+1).
| |         f(n-i) = f(n) ⇒ MinAr(f;j+i;n) = MinAr(f;j;n-i)+i
| |    {min_ar_alt}
| |    [f;n;n-k;k]
| |
| .....antecedent .....
| ⊢  f(n-(n-k)) = f(n)  by Assert (n-(n-k) = k) THEN RWH (HypC 6) 0
|
.\
. 5. ¬k<n
. ⊢
. | by Inst
. |    Thm* ∀f:(ℕ→𝔹), n:ℕ, i:ℕ(n+1), j:ℕ(n-i+1).
. |         f(n-i) = f(n) ⇒ MinAr(f;j+i;n) = MinAr(f;j;n-i)+i
. |    {min_ar_alt}
. |    [f;k;k-n;n]
. |
. .....antecedent .....
. ⊢  f(k-(k-n)) = f(k)  by Assert (k-(k-n) = n) THEN RWH (HypC 6) 0
END
```